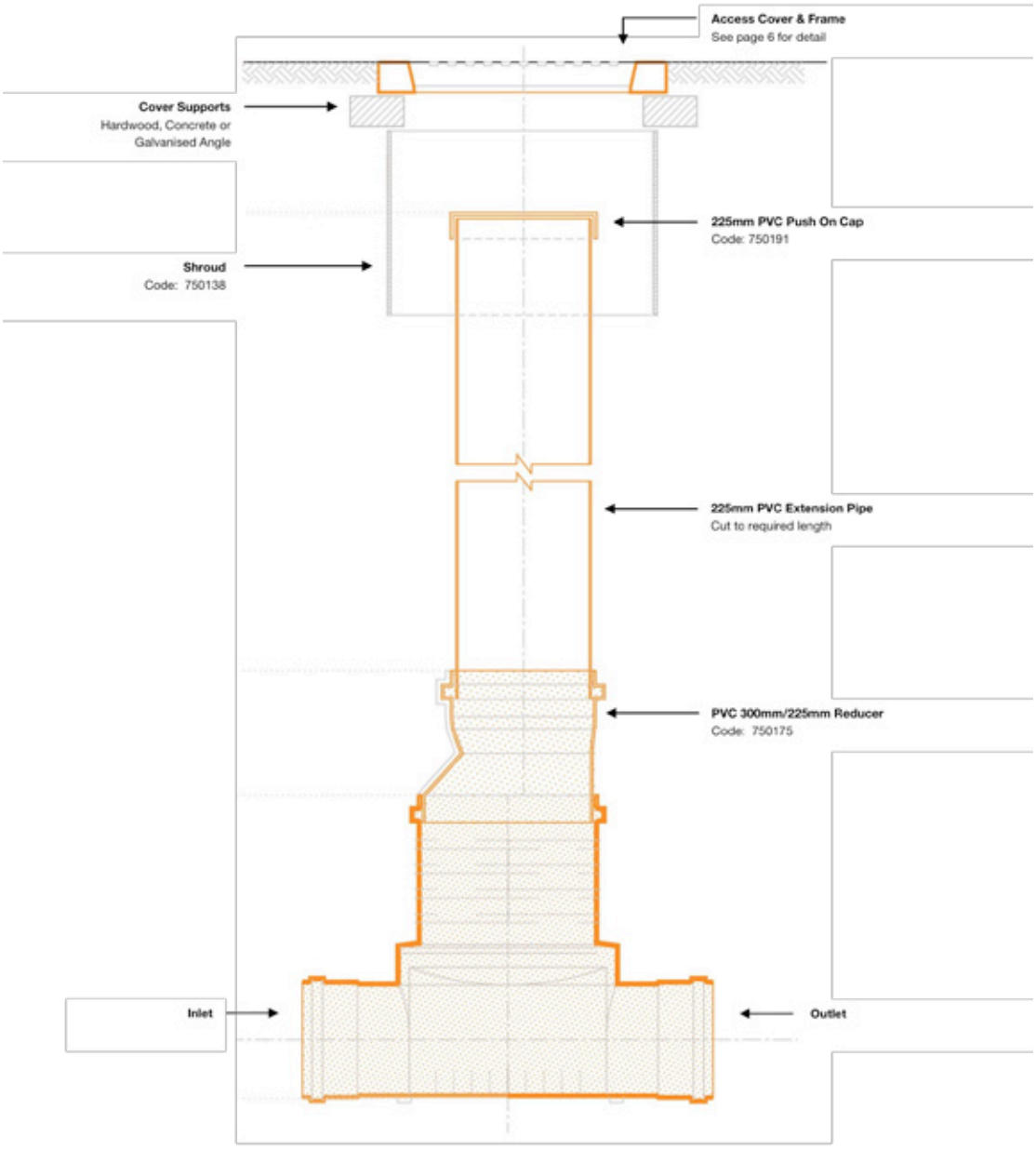
SMS Maintenance Shafts

Installation Overview



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Installation Overview

General Installation Instructions

Step 1 – Preparation of the site

Prepare sewer pipe trench and bedding material as per the site plan and in accordance with local regulatory requirements.

Step 2 – Placing the Maintenance Shaft

Scallop out sufficient material at the base of the trench to accommodate the base of the Sewer Maintenance Shaft. Place SMS maintenance shaft into position in the trench ensuring sockets are at the same depth as the adjoining pipes.

Step 3 – Connecting the Downstream and Upstream Pipes

Connect downstream and upstream sewer pipes using the rubber ring joints and an appropriate bacterial lubricant. SMS shafts are designed for use with standard sized PVC Sewer Pipes. Ensure that the pit is level by placing a level across the top of the vertical riser.

Step 4 – Compact the Sewer Maintenance Shaft into Place

Place and compact fine support material/sand around the base of the shaft to a minimum cover of 100mm.

Step 6 – Connecting the Vertical Riser

Prepare the PVC pipe riser and install as per the instructions on **page 5.**

Step 7 – Backfill

Complete backfill around the shaft and in the sewer pipe trench as per the site plan and in accordance with local regulatory requirements.

Step 8 – Installing the Access Cover

Cut the PVC pipe riser between 200mm and 300mm below the finished surface level and install the PVC end cap.

Place the shroud over the pipe riser and install access cover and supports as per the instructions on **page 6.**

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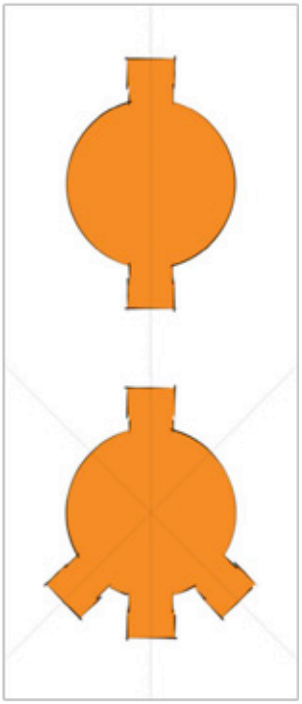
Connections



Maintenance Shaft – Straight

The Maintenance Shaft Straight features in-line 180 degree throughput only.

Maintenance Shaft - Junction

The Maintenance Shaft Junction features in-line 180 degree throughput **plus two additional 45 degree inlets.**

NOTE: ONLY TWO OF THE THREE INLETS MAY BE USED AT ANY SINGLE JUNCTION. ONE INLET MUST ALWAYS BE SEALED USING A PVC PUSH IN PLUG (CODE: 750141)

Push In Plug Installation

When installing the mandatory push in plug, local restrictions may specify that the plug is secured in place using a method specified by local water authority or council.

Some current methods include:

- Placing a bag of dry cement in front of the plug
- Placing a wet mix of concrete in front of the plug
- Placing a small wooden or metal stake/peg in front of the plug

Please check the particular method specified in your area with the local council or water authority.

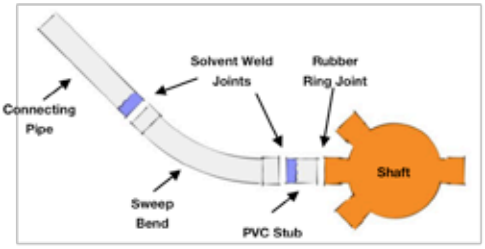
SMS Maintenance Shafts

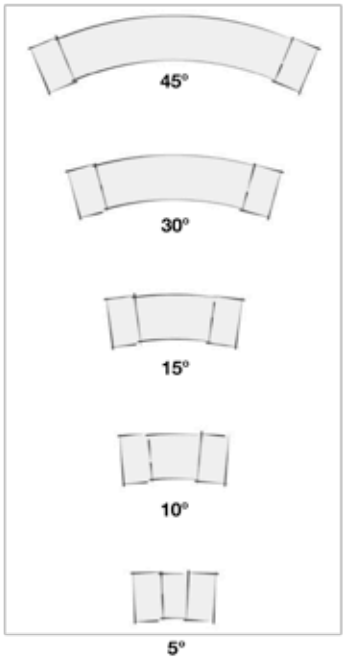
Connections & Angles

PVC Sweep Bends

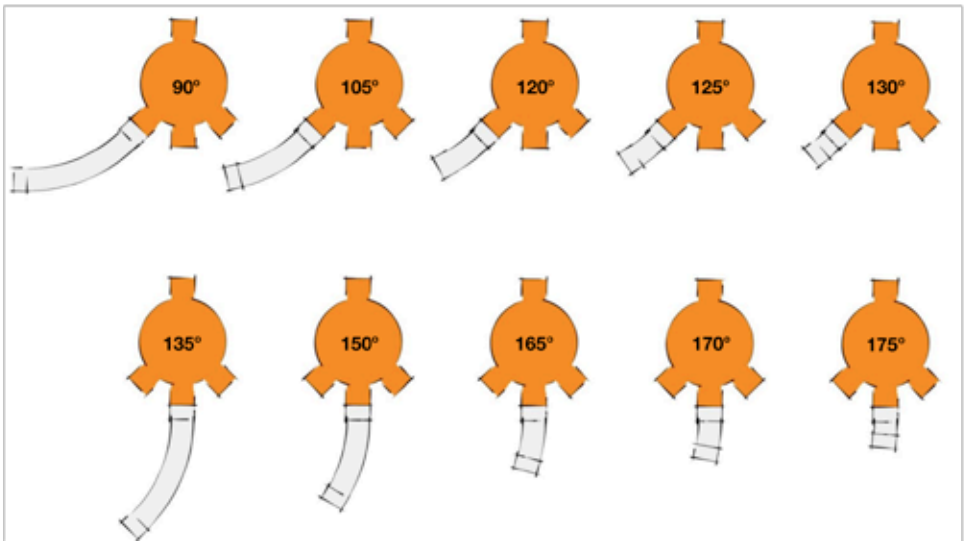
To achieve different approach angles when using Sewer Maintenance Shafts, a variety of PVC sweep bends can be used in combination with the existing outlets on our maintenance shafts.

All sweep bends feature a 1020mm radius and sockets at both ends. In order to join them to the maintenance shafts, a small stub of PVC is solvent welded to the sweep bend socket and inserted into the Rubber Ring Joint.





Using PVC Sweep Bends, SMS Maintenance Shafts allow the easy joining of sewer inlet pipes at many angles. See the illustration below for examples of achievable angles.



SMS Maintenance Shafts

Vertical Riser

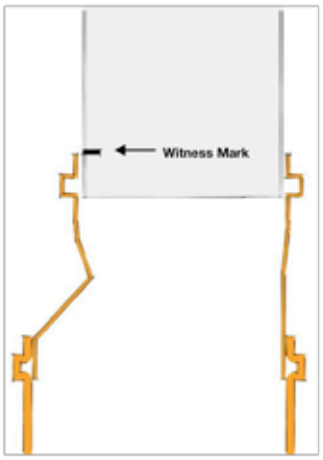
Allowing for Differential Settlement

When preparing the extension pipe riser, care must be taken to ensure that allowances are made for settlement and consolidation.

Place a witness mark on the pipe 30mm less than the depth of the socket.

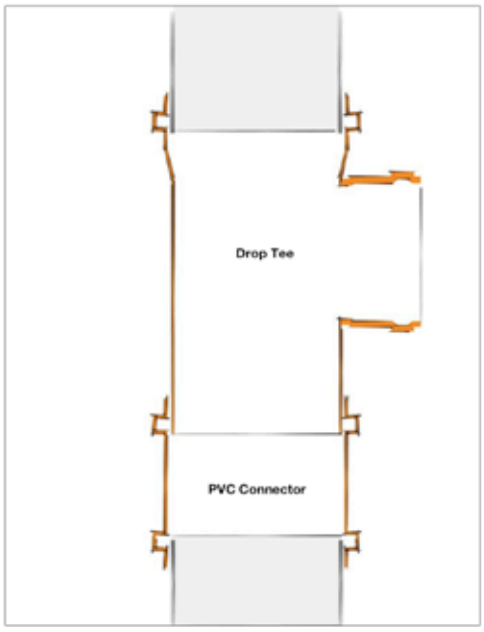
When the Shaft is in place, insert the pipe into the socket up to the witness mark.

This prevents load transmission to both the maintenance shaft and sewer line.



Additional Inlets

Depending on local restrictions, additional inlets can be installed using Drop Tee's attached to the Extension Pipe Riser. Up to two additional inlets can be provided using this method.



SMS Maintenance Shafts

Access Cover Installation

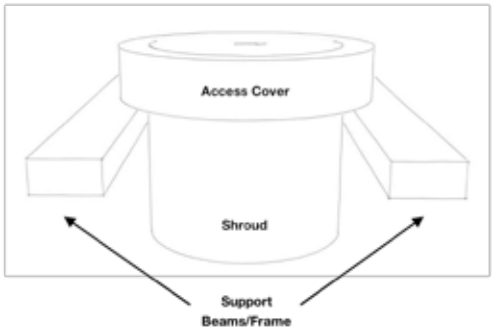
Access Cover

The access cover is installed independently of the maintenance shaft and riser pipe. Key components of the access cover installation include;

Support Beams /Frame – These can be made from Hardwood, Concrete or Galvanised Steel Angle and support the full weight of the access cover.

Shroud – Either Polyethylene or PVC material and 450mm in diameter. The shroud forms a barrier to the backfill material and ensures that easy access to the pipe riser is maintained. The supports are placed either side of the shroud and bear the full weight of the cover.

Load Class – Select an access cover with an appropriate load class for the type of for the traffic which will be crossing the channel.



A Class

Areas (including footways) accessible only to pedestrians and pedal cyclists and closed to other traffic.

750179 – CONCRETE SHAFT COVER WITH 340MM CLEAR OPENING

750112 – CONCRETE SHAFT COVER WITH 400MM CLEAR OPENING

B Class

Areas (including footways and light tractor paths) accessible to vehicles (excluding commercial vehicles) or livestock

750178 – CLASS B CONCRETE SHAFT COVER WITH 370MM CLEAR OPENING

D Class

Carriageways of roads and areas open to commercial vehicles.

750140 – CLASS D DUCTILE IRON SHAFT COVER WITH 400MM CLEAR OPENING