Drexus XL

Marshalls
Creating Better Spaces

Installation Guidelines

www.marshalls.co.uk/watermanagement

1. Excavation & Setting Out

a. Mark out the required line of drainage.

b. Mark out the required level for the system.

c. Excavate trench with an additional depth and width of 150mm (C250/D400) or 200mm (F900) each side than the respective dimensions of the selected Channel and Lid. For channel depths see the Marshalls drainage design guide. Suitable trench support and edge protection should be used if identified by the site risk assessment.

2. Access and Outfall Chamber installation

a. Excavate to formation level

b. Install trench support and excavation access as required

c. Prepare formation by trimming or laying blinding concrete

d. Position chamber or silt box unit in excavation

e. Set chamber to correct level and orientation using non-compressible setting block

f. Install formwork and supports for the concrete surround

g. Provide temporary support to the unit as required to maintain position during placement of base concrete

h. Place concrete around chamber unit to form base and part of the vertical surround. The surround should extend no more than 75 mm up the side of the chamber unit

i. Check level and orientation, adjust as required

j. After initial set has been achieved, install additional chamber units and connection pipework in position as required

k. Extend formwork and place concrete generally as items 6, 7, 8 & 9 to the top surface of the chamber

l. When the concrete has achieve strength, strike formwork and remove

m. Backfill chamber to the underside of the final pavement construction or as required

n. Bed and haunch cover and frame using a minimum mortar Class 12 to BS EN 998-2 or a similar proprietary bedding compound suitable for application and loading. Level and adjust as required.

3. Drexus XL Unit Installation

a. Line the trench bottom with a 150mm (C250/D400) or 200mm (F900) deep layer of semi-dry concrete to provide a bed for the Channel. The mix is specified in the drainage design guide.

b. Manually lift the channel into position if safe to do so. The channel can be lifted by straps if manual handling is unsuitable. Seek further guidance on lifting equipment from the relevant supplier.

c. It is preferred but not essential to have the male end of the coupling at the start of the run.

d. Align the horizontal locators at the channel couplings; these can then be fixed in place with a nut and bolt or a zip tie.

e. Tamp the top of the Channel along its length until it is to line and level.

f. If necessary pin the feet into position by placing a suitable pin (e.g. setting out pin) into the V notch of the channels feet. The channel can also be braced to the walls of the trench; this will help avoid movement of the system during the concrete pour.

g. Pour the concrete evenly each side of the channel until the feet are fully submerged.

h. Remove feet pins prior to the concrete setting if they are required.

i. Leave the concrete to set this should usually achieve enough stiffness in 12 hours.

4. End Cap and End Cap Outlet

a. The channels should be terminated with either an end cap or end cap outlet. The end cap is universal for both male and female ends of the channel whereas the end cap outlet is specific.

b. When terminating the run at an access chamber/outfall an access chamber connector should be used to enter the chamber it can be trimmed to suit. The end cap outlet has also been designed to transition to standard drainage twin wall pipe by way of a standard coupling.

5. Surface Installation

a. Prior to the next pour of concrete reinforcement bars should be installed if required by the pavement design. Engineering advice should be sought for specific guidance.

b. Ensure a bung is placed into each of the inlet slots to prevent concrete ingress

c. Continue to pour concrete to surface level with the top of the rubber bungs.

d. Finish the concrete surface with power float type devices which will move over the rubber bungs.

e. When the concrete has set the inlet bungs can be removed, this is best achieved by piercing the units and levering along the inlet.

f. After concreting the system should not be loaded with passing traffic until the concrete has had time to fully cure.

In accordance with the Health and Safety at Work etc Act 1974, the Manual Handling Operation Regulations 1992 (as amended 2004) and the Construction (Design and Management) Regulations 2007, risk assessments should be carried out to protect workers from risks associated with musculoskeletal disorders and work related upper limb disorders.

This may require the use of lifting aids to assist installation.