

# INSTALLATION AND MAINTENANCE INSTRUCTIONS

## 1. INSTALLATION:

- 1 450mm inspection chambers may be used as an alternative to traditionally constructed manholes for inverted depths of up to 1.2 metres. (using the CD 453 base and CD 455 Risers as supplied by your Clark-Drain stockist). (Fig 1)
- 2 Alternative depths can easily be created by simply cutting a riser section in between the rib sections, to the required height using a fine tooth saw.
- 3 The chamber has a push-fit jointing system using ring seals fitted around the risers to enable water testing to be carried out on depths up to 1.2 metres. Lubricate seals prior to use.
- 4 Chambers should be installed on a 100mm bed of suitably as-dug or granular material and care should be taken to ensure the bedding material is evened out under the base so that the chamber is fully supported. Check all connections are clean and free from dirt or grit that could prevent the seals working effectively.
- 5 All unused inlets/holes should be closed off using the provided easy-fit bungs. (Fig 2)
- 6 Use the blanking plates that are provided in unused inlets to stop waste build-ups and unwanted smells and odours. (Fig 3)



Fig 1

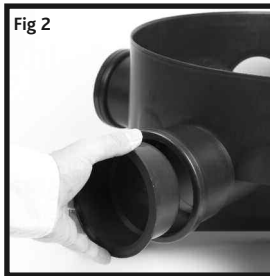


Fig 2

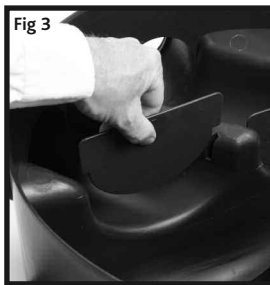


Fig 3

- 7 If more than 3 easy-fit bungs or blanking plates are required, please contact your local Clark-Drain stockist for further supplies.
- 8 It is recommended that only pipes of 110mm O/D conforming to BS EN 1401-1: 1998 are connected to the CD 453 base inlets and outlet.
- 9 Pipes of smaller diameters can be used, but correctly-specified level invert reducers must be used – contact your Clark-Drain stockist for further information.
- 10 Using the same material as used when bedding the chamber, apply backfill around the base to the underside of the inlet/outlet sockets in 100mm layers. This will supply the base with adequate stability when locating the risers. The inside of the base should again be kept free from debris.
- 11 Before a riser is installed into the base or a preceding riser section, the ring seal should be located in the recess or space provided – care should be taken to ensure the seal is correctly fitted and seated around the entire circumference of the riser and has no kink in the seal. Sufficient lubricant (e.g. silicon) should be applied to both the inside top edge of the base or preceding riser section AND the ring seal itself – this will ensure both ease of installation and performance of the seal.
- 12 The riser should be evenly positioned into the base or previous riser section ready to be pushed into place – physical force should be enough for this; However if not, then a protective wooden block, or similar item, should be placed over the top of the riser so that light mechanical force can be used to fit the riser into the base.

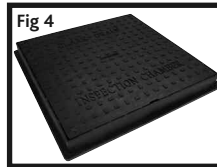


Fig 4



Fig 5

- 13 When all risers and the cover and frame are securely fitted, the trench can be back-filled using dug-out material in 200-300mm layers mechanically packed down tightly. The dug-up material should be free from stones larger than 40mm, lumps of clay over 100mm, timber, frozen material and vegetable matter. Care must be taken not to knock the risers and keep the units free from debris while back-filling.
- 14 Once back-filled the top riser can be levelled to match the finished ground level, and then the cover and frame (available separately) fitted to further prevent debris from entering the drain. (The use of Clark-Drain products (CLKS 451, CLKS 452, CLKS 1657 KMB, CLKS 450SR or CLKS 450SR/46SL) is recommended as suitable covers & frames.) (Fig 4 and 5)

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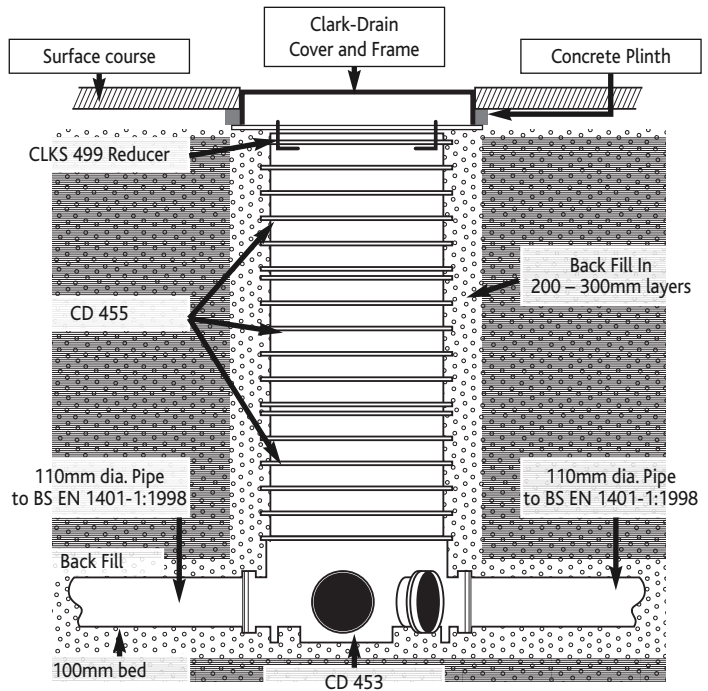
**15** Back-fill should extend to just below ground level so that the cover and frame can be set in a concrete plinth. The surrounding finishing layer can then be put down.

**16** If the finished ground level is not being put down straight away it can prove to be good practice to leave the top riser sticking out of the ground and trim down at the last stages to ensure the unit is at the correct height. If this is the case, a Clark-Drain cover and frame can still be fitted on a temporary basis to prevent debris from entering the drain.

**17** Clark-Drain inspection chambers CD 453 and risers CD 455 are designed to withstand water testing in accordance with BS EN 1610. Chambers may be filled to ground level (1.2 metres max) in isolation or as part of a pipeline or complete drainage installation.

**18** Due to the non-absorbent nature of plastic materials the one hour conditioning period is not necessary prior to carrying out a water test

**19** After cleaning or rodding, re-fit the cover and re-secure with original screws.



## 2. MAINTENANCE/CLEANING:

- 1 The Clark-Drain inspection chamber can be cleaned by jet/pressure washing.
- 2 Before cleaning remove all fixings from the Clark-Drain cover, and place them to one side. Take care when lifting recessed covers (such as CLKS 450SR) filled with blocks as these may be quite heavy and always seek help if necessary.
- 3 The inside walls and base of the chamber can then be cleaned as desired using either cold or hot water at a maximum temperature of 65°C.
- 4 In order to avoid unnecessary contamination of drainage systems, the use of detergents and/or bleach should be avoided where possible, although both the chamber base CD 453 and risers CD 455 are designed to withstand such substances and chemicals.
- 5 Always ensure that excess water is "flushed" out of the chamber base in the normal direction of flow, towards the outlet pipe.
- 6 For rodding, repeat step 2.2 then rod as desired in the direction of flow.



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