Quick Guide – Product and Installation
Range 450 IC

Description

450mm diameter polypropylene inspection chamber for adoptable and non-adoptable applications. Compliant with Sewers for Adoption 7th edition [SfA7].

Choice of eight bases for equal and unequal pipe connections.

Dedicated bases for use directly with either 110/160mm plastic pipework or 150mm UltraRib system via the appropriate adaptor (6UR141).

450mm diameter shaft may be cut to length to achieve required invert up to maximum 3 metres.

Applications

- For above ground access and maintenance inspection of buried pipework up to 3 metres deep
- For loading applications:
  - A15 (1.5 tonnes)
  - B125 (12.5 tonnes) *
  - D400 (40 tonnes) *

* With cover & frame supported by concrete plinth

NOTE: Concrete plinth not required for non-loaded applications such as domestic gardens

Key Dimensions

- Invert depth of bases: 440-462mm (at centre point of base)
- External shaft diameter: 515mm
- Shaft length: 3m
- Maximum installation depth: 3m

Key Features & Benefits

- Full range of dedicated bases, ensure that smooth flow can be achieved
- Quick & easy to install, with a sculpturedneck on the base, which allows the shaft to be fitted with little effort
- Lightweight polypropylene chamber bases, no lifting equipment required
- 3m shaft can be cut to required length

Compliance

Range 450 chambers comply with the following standards and regulations

- BS EN 13598-2: 2009
- SfA7 Typical Chamber Detail – Type 3: (Non-entry. Maximum depth from cover level to soffit of pipe: 3m)
- Building Regulations – Part H1: Shallow and/or Deep

Range 450 Inspection Chamber assembly

This Quick Guide is an extract from brochure (ref OWIC001) Osma + Wavin Inspection Chambers, Product and Installation Manual.
The full document is available for download at www.wavin.co.uk

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Range 450 Chamber and Shaft

NOTE: The following is a summary of installation procedures following selection of a suitable Range 450 Base for the required number of inlets.

Excavation

- Take precautions against trench collapse: support trench sides deeper than 1.2m

Preparation

- Prepare and compact 100mm regulating bed of granular material in trench bottom

Positioning/connection

- Position Base on regulating bed. Check outlet is facing in the correct direction: i.e. with side inlets swept to follow water flow
- If connecting to 150mm UltraRib, insert the appropriate adaptors into the required inlet/outlet as follows:
  - 150mm UltraRib use Adaptor 6UR141
- Use standard jointing sequence to connect 100/110mm or 150/160mm pipes to inlets/outlet. Push Blank-off Plugs into any unused inlets

NOTE: The main through channel MUST be used. Bends up to 45° may be used on any inlet or outlet.

Backfill

- Using same material as bedding, backfill around Base in 150mm layers up to underside of shaft socket. Ensure inside of Base is free of debris

Preparing shaft

- Cut corrugated shaft to approx. Invert depth of Chamber. RECOMMENDATION: leave extra 300mm depth to allow for possible final site changes
- Locate sealing ring between 2nd and 3rd ribs from shaft bottom. Ensure ring is seated correctly/not twisted
- Clean inside of Base socket and lubricate this entire area
- Position shaft at 45° angle into Base socket. Vertically push home manually or, if required, with mechanical assistance (if so, protect top of shaft)

Backfill trench

- Before starting backfill, cover top of shaft to prevent ingress of dirt or grit

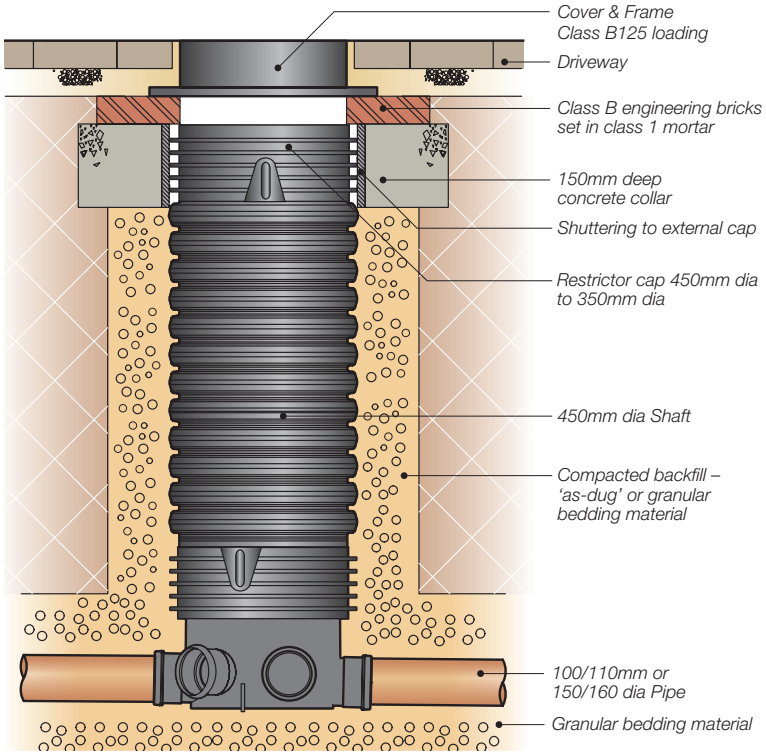
Trim shaft/fit restriction access cap

- Trim shaft to required height using fine toothed saw

NOTE: If finished ground level is not yet known, leave shaft proud of surface and keep open end covered until final completion.

- When shaft trimmed to final height, locate sealing ring between 2nd and 3rd ribs from shaft top. Ensure ring is seated correctly/not twisted
- Lubricate inside of the 450 to 350mm restrictor cap, position over top of shaft, and push fully home

Figure 19: Typical installation detail: Range 450 Inspection Chamber. Type 4



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Range 450 IC

Installation procedures:

For A15 applications in domestic garden areas and/or subject to occasional vehicle loading up to 15kN (1.5 tonnes) (See Figure 20)

EXAMPLE: domestic driveways

- Leave top 150mm of shaft clear of backfill
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber
- Prepare A15 Cover and Frame for installation in accordance with manufacturer's instructions
- Position the cover and frame socket on top of slab and fix in accordance with manufacturer's instructions

B125 & D400 Cover and Frame

Installation procedures:

For B125 – Paved areas with limited traffic load

- Trim shaft section at last stage of construction. Ensure unit is at correct height
- Protect shaft from traffic loading by shuttering its external ribs (See Figure 21)
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber with minimum opening 750mm x 750mm – or 750mm diameter – to ensure that any loads are distributed away from the shaft
- Position Ductile Iron B125 Cover and Frame on top of slab. (See Figure 21)

Trafficked application (e.g. roadway)

- Follow Highway Specification for installation of a D400 Cover and Frame

Figure 20: Installation detail A15 –domestic gardens and/or areas subject to occasional vehicle loading up to 15kN (1.5 tonnes)

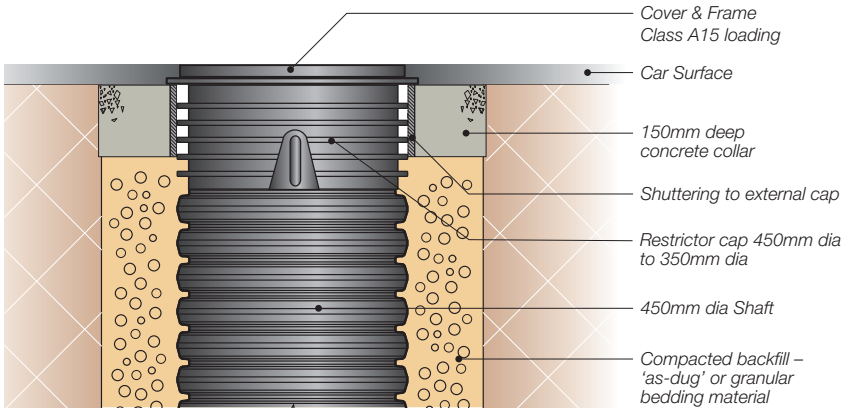

Figure 21: Installation detail for B125 loading: paved areas with limited traffic load