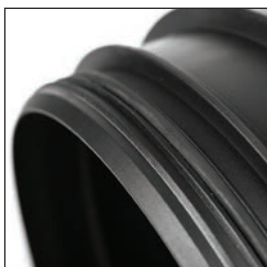


# THE CLARK-DRAIN POLYPROPYLENE INSPECTION CHAMBER SERIES



# THE CLARK-DRAIN 300 Series overview

FOR USE IN 110MM DRAINAGE LAYOUTS WITH INVERTS UP TO 600MM, THE 300 SERIES INSPECTION CHAMBER PROVIDES OPTIMUM PERFORMANCE AND EASE OF INSTALLATION ACROSS A WIDE RANGE OF HIGH QUALITY DRAINAGE ASSEMBLIES.

## APPLICATIONS

- For above ground access and maintenance inspection of buried pipework in shallow installations
- A choice of 35kN and 15kN load rating capabilities (suitable for domestic driveways and pedestrian areas)

## COMPLIANCE

The Clark-Drain 300 series comply with the following standards and regulations:

- BS EN 13598-1:2010
- SfA7 – Type 4
- Building Regulations – Part H (Shallow only to maximum invert depth of 0.6m)

## FEATURES AND BENEFITS

### CHOICE OF INVERTS

- Effective depth per riser of 190mm and 400mm
- Maximum depth to invert from cover level is 400mm and 600mm

### EASE OF INSTALLATION

- The tilt action on the cover frame enables alignment with the finished ground level on slopes of up to 15°
- The chamber base allows for multiple connections and variations in direction to any 110mm drainage layout
- Easy fit bungs to block off unused inlets



### CIRCULAR COVER AND FRAME

Product code: CD 352

- Circular cover and frame design is ideal for tarmac, grass or gravel areas
- Inclination of frame can be adjusted to suit a surface gradient of up to 15°
- Slip-resistant surface tread pattern
- Screw down fixing (secures cover to frame)
- Load rating capacity of 15kN is suitable for pedestrian areas



### RISER

Product codes:  
CD U354 and CD U355

- 320mm diameter riser with 35kN load rating classification
- Choice of riser to achieve 190mm or 400mm effective depths
- Ribbed design improves assembly strength



### EFFICIENCY GAINS ON SITE

- Choice of riser depths provide cost effective installation options
- For either pedestrian or domestic driveway use (depending on cover selection – square to round, circular or recessed)

### STRENGTH AND DURABILITY

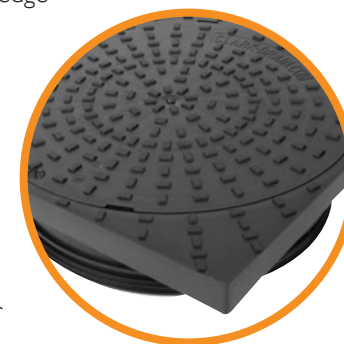
- Ribbed design on riser increases product durability and product life
- Polypropylene cover options can withstand 15kN and 35kN loads
- Joint seals locate base-to-riser to prevent in situ movement and provide a water resistant joint



### SQUARE TO ROUND COVER AND FRAME

Product code: CD 356

- Square to round design enables block paving to square neatly up to the frame edge
- Inclination of frame can be adjusted to suit a slope of up to 15°
- Load rating capacity of 15kN is suitable for pedestrian areas
- Slip-resistant surface tread pattern
- Screw down fixing (secures cover to frame and frame to chamber)



### RECESSED COVER AND FRAME

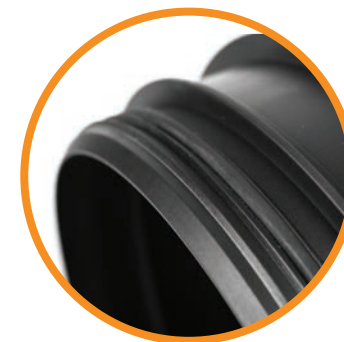
Product code: CD 300SR

- Recessed cover eliminates the need to cut paving around a circular opening
- Cover can be turned to match the direction of paving
- Load rating capacity of 35kN suitable for domestic driveways
- Integral lifting keys tested to withstand 120kgs of direct lift



### JOINT SEAL

- Locates base to riser to provide a water resistant joint and prevent in-situ movement



### CHAMBER BASE

Product codes:  
CD U351 and CD U353

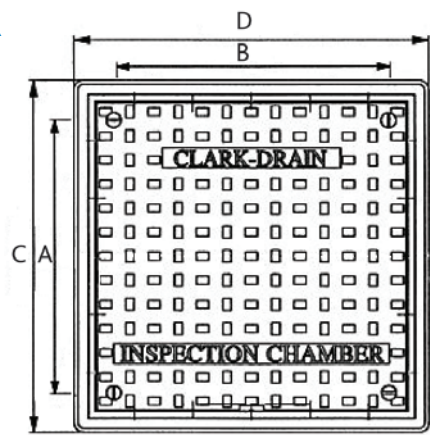
- Three and five inlet options for multiple directional flow of waste water and layout flexibility
- Angled inlets prevent cross and back flow of waste water within the chamber



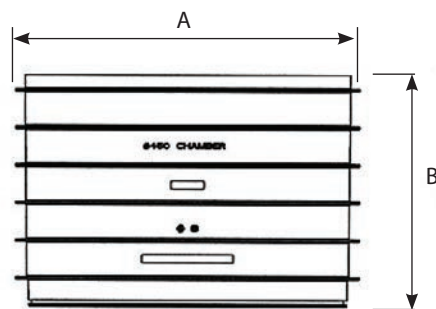


# Dimensions Guide

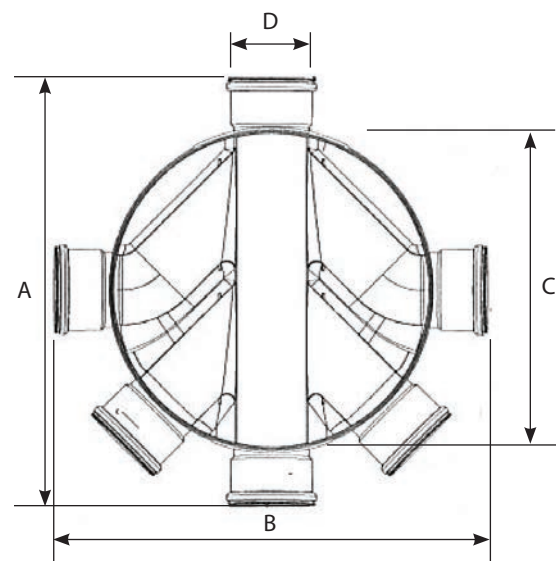
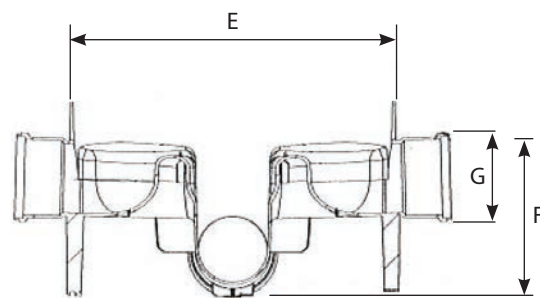
## COVER



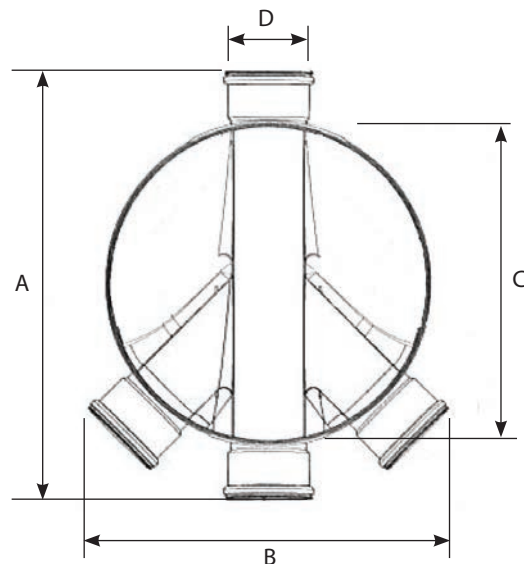
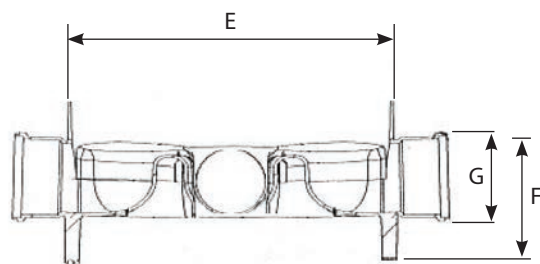
## RISER



## FIVE INLET BASE



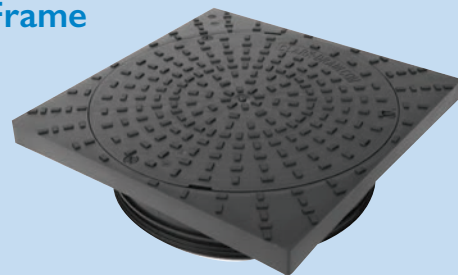
## THREE INLET BASE



# THE CLARK-DRAIN 300 Series

Clark-Drain provides an extensive range of cover options which connect to the 300 series risers.

## 300mm Dia. Clear Opening Square to Round Cover and Frame



Product code: CD 356

### Cover and frame

- 15kN load rating classification
- Ideal for paved areas subject to pedestrian footfall only
- 15° tilt action enables easy levelling on sloped surfaces
- Enhanced slip resistant tread pattern

	A/B	C/D	E
Dimensions (mm)	300 Dia.	380 x 380	80*

\* Depth including locating ring. Depth of frame only is 30mm

## 300mm Dia. Clear Opening Circular Cover and Frame



Product code: CD 352

### Cover and frame

- 15kN load rating classification
- Ideal for tarmac, grass or gravel areas subject to pedestrian footfall only
- 15° tilt action enables easy levelling on sloped surfaces
- Enhanced slip resistant tread pattern

	A/B	C/D	E
Dimensions (mm)	303 Dia.	388 Dia.	80*

\* Depth including locating ring. Depth of frame only is 30mm

## 300mm Dia. Clear Opening Recessed Cover and Frame



Product code: CD 300SR

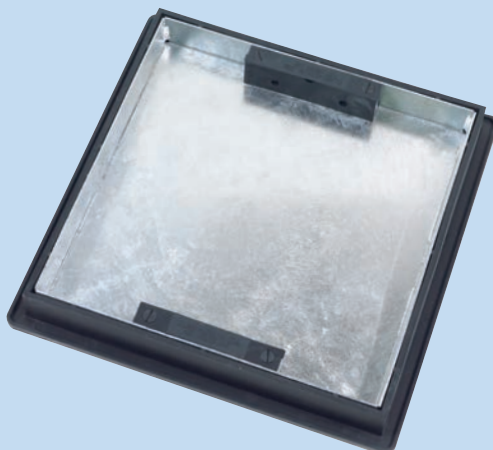
### Cover and frame

- 35kN load classification rating
- Suitable for domestic driveway loadings
- Cover can be rotated to match direction of paving pattern
- Recessed for block paving up to 60mm deep
- Fitted with integral lifting keys

	A/B	C/D	E
Dimensions (mm)	300 Dia.	438 x 438	80*

\*Not including location rings

## 300mm Dia. Clear Opening Recessed Cover and Frame



Product code: TIG3

### Cover and frame

- 5T GPW load rating classification
- Suitable for internal pedestrian areas
- Galvanised steel recessed cover for concrete/screed infill
- Factory fitted rubber sealing gasket prevents unwanted odours
- Integral lifting keys

	A/B	C/D	E
Dimensions (mm)	220mm Dia.*	440 x 440	52*

\* Standard clear opening of 220mm can be cut to increase up to 300mm

All 300 series covers, risers and bases are made from 100% recycled polypropylene

320mm Dia. Chamber Base



Product code: CD U351

Base

- 35kN (3.5 tonnes) maximum when used with matching CD U355 riser and appropriate Clark-Drain manhole cover and frame and installed to Clark-Drain guidelines
- 3 way 'level' design for system flexibility
- Supplied with 2 Easy-fit bungs to block off unused inlets

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

320mm Dia. Chamber Base



Product code: CD U353

Base

- 35kN (3.5 tonnes) maximum when used with matching CD U355 riser and appropriate Clark-Drain manhole cover and frame and installed to Clark-Drain guidelines
- 5 way 'stepped' design for system flexibility
- Supplied with 4 Easy-fit bungs to block off unused inlets

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

320 Dia. Chamber Riser



Product code: CD U354

Base

- 35kN (3.5 tonnes) maximum when used with matching CD U353 chamber base and appropriate Clark-Drain manhole cover and installed to Clark-Drain guidelines
- Supplied with joint seal
- Total depth can be up to 0.4m when used with matching CD U351 or CD U353 chamber base
- Range of matching manhole covers available to suit most applications

	A	B
Dimensions (mm)	350	227

320 Dia. Chamber Riser



Product code: CD U355

Base

- 35kN (3.5 tonnes) maximum when used with matching CD U353 chamber base and appropriate Clark-Drain manhole cover and installed to Clark-Drain guidelines
- Supplied with joint seal
- Total depth can be up to 0.6m when used with matching CD U351 or CD U353 chamber base
- Range of matching manhole covers available to suit most applications

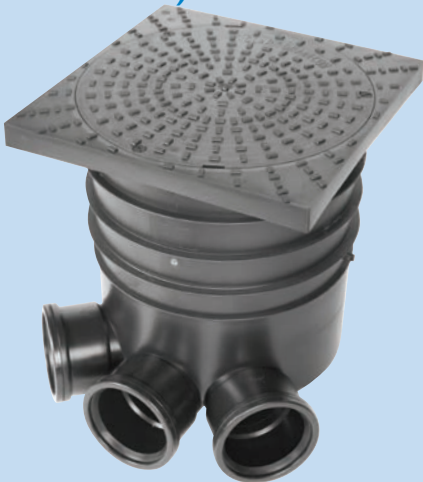
	A	B
Dimensions (mm)	355	440

All 300 series assemblies satisfy maximum inverts up to 0.4 and 0.6m as stated in the Building Regulations Part H

For use directly with 110mm plastic pipe work

Risers may be cut to achieve required invert depth

300mm Dia. Clear Opening Square to Round Lid Assembly (3 inlet base)



- Invert elevation to maximum 0.4m
- 15kN load classification rating

Product code: CD U3001

Cover and frame

- For pedestrian areas
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E
Dimensions (mm)	303 Dia.	380 x 380	80*

\* Depth including locating ring. Depth of frame only is 30mm

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. Base incorporating 3 inlets with angled channels to aid water/waste flow (Supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

Assembled codes are CD 356, CD U354 and CD U351

- Invert elevation to maximum 0.4m
- 15kN load classification rating

Product code: CD U3002

Cover and frame

- For pedestrian areas
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E
Dimensions (mm)	303 Dia.	388 Dia.	80*

\* Depth including locating ring. Depth of frame only is 30mm.

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. Base incorporating 3 inlets with angled channels to aid water/waste flow (Supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions	485	415	330	110	320	220	130

Assembled codes are CD 352, CD U354 and CD U351

300mm Dia. Clear Opening Recessed Lid Assembly (3 inlet base)



- Invert elevation to maximum 0.4m
- 35kN load classification rating

Product code: CD U3003

Cover and frame

- Suitable for driveway loadings
- Fitted with integral lifting keys
- Cover can be rotated to match direction of paving pattern
- Recessed for block paving up to 60mm deep

	A/B	C/D	E
Dimensions (mm)	300 Dia.	438 x 438	80*

\* Not including locating rings

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. Base incorporating 3 inlets with angled channels to aid water/waste flow (Supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

Assembled codes are CD 300SR, CD U354 and CD U351

All 300 series covers, risers and bases are made from 100% recycled polypropylene



300mm Dia. Clear Opening  
Square to Round Lid Assembly  
(5 inlet base)



- Invert elevation to maximum 0.4m
- 15kN load classification rating

Product code: CD U3004

Cover and frame

- For pedestrian areas
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E	* Depth including locating ring. Depth of frame only is 30mm
Dimensions (mm)	303 Dia.	380 x 380	80*	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. Base incorporating 5 inlets with angled channels to aid water/waste flow (Supplied with 4 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 356, CD U354 and CD U353

300mm Dia. Clear Opening  
Circular Lid Assembly  
(5 inlet base)



- Invert elevation to maximum 0.4m
- 15kN load classification rating

Product code: CD U3005

Cover and frame

- For pedestrian areas
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E	* Depth including locating ring. Depth of frame only is 30mm
Dimensions (mm)	303 Dia.	388 Dia.	80*	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. base incorporating 5 inlets with angled channels to aid water/waste flow (Supplied with 4 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 352, CD U354 and CD U353

300mm Dia. Clear Opening  
Recessed Lid Assembly  
(5 inlet base)



- Invert elevation to maximum 0.4m
- 35kN load classification rating

Product code: CD U3006

Cover and frame

- Suitable for domestic driveways
- Fitted with integral lifting keys
- Cover can be rotated to match direction of paving pattern
- Recessed for block paving up to 60mm deep

	A/B	C/D	E	* Depth including locating ring.
Dimensions (mm)	300 Dia.	438 x 438.	80*	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.19m with one riser

	A	B
Dimensions (mm)	350	227

Base

- 320mm Dia. Base incorporating 5 inlets with angled channels to aid water/waste flow (Supplied with 4 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 300SR, CD U354 and CD U353

300mm Dia. Clear Opening  
Square to Round Lid Assembly  
(3 inlet base)



- Invert elevation to maximum 0.6m
- 15kN load classification rating

Product code: CD U3011

Cover and frame

- Suitable for pedestrians
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E	* Depth including locating ring. Depth of frame only is 30mm
Dimensions (mm)	303 Dia.	380 x 380	80*	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. Base incorporating 3 inlets with angled channels to aid water/waste flow (supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

Assembled codes are CD 356, CD U355 and CD U351

300mm Dia. Clear Opening  
Circular Lid Assembly  
(3 inlet base)



- Invert elevation to maximum 0.6m
- 15kN load classification rating

Product code: CD U3012

Cover and frame

- For pedestrian areas
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E	* Depth including locating ring. Depth of frame only is 30mm
Dimensions (mm)	303 Dia.	388 Dia.	80	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. Base incorporating 3 inlets with angled channels to aid water/waste flow (supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

Assembled codes are CD 352, CD U355 and CD U351

300mm Dia. Clear Opening  
Recessed Lid Assembly  
(3 inlet base)



- Invert elevation to maximum 0.6m
- 35kN load classification rating

Product code: CD U3013

Cover and frame

- Suitable for domestic driveway loadings
- Fitted with integral lifting keys
- Cover can be rotated to match direction of paving pattern
- Recessed for block paving up to 60mm deep

	A/B	C/D	E	* Not including locating rings
Dimensions (mm)	300 Dia.	438 x 438	80*	

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. base incorporating 3 inlets with angled channels to aid water/waste flow (supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	485	415	330	110	320	220	130

Assembled codes are CD 300SR, CD U355 and CD U351

All 300 series covers, risers and bases are made from 100% recycled polypropylene

300mm Dia. Clear Opening Square to Round Lid Assembly (5 inlet base)



- Invert elevation to maximum 0.6m
- 15kN load classification rating

Product code: CD U3014

Cover and frame

- Suitable for pedestrians
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E
Dimensions (mm)	303 Dia.	380 x 380	80*

\* Depth including locating ring. Depth of frame only is 30mm

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. base incorporating 3 inlets with angled channels to aid water/waste flow (supplied with 2 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 356, CD U355 and CD U353

300mm Dia. Clear Opening Circular Lid Assembly (5 inlet base)



- Invert elevation to maximum 0.6m
- 15kN load classification rating

Product code: CD U3015

Cover and frame

- Suitable for pedestrians
- 15° tilt action enables easy levelling on sloped surfaces

	A/B	C/D	E
Dimensions (mm)	303 Dia.	388 Dia.	80*

\* Depth including locating ring. Depth of frame only is 30mm

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. base incorporating 5 inlets with angled channels to aid water/waste flow (supplied with 4 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 352, CD U355 and CD U353

300mm Dia. Clear Opening Recessed Lid Assembly (5 inlet base)



- Invert elevation to maximum 0.6m
- 35kN load classification rating

Product code: CD U3016

Cover and frame

- Suitable for domestic driveways
- Fitted with integral lifting keys
- Cover can be rotated to match direction of paving pattern
- Recessed for block paving up to 60mm deep

	A/B	C/D	E
Dimensions (mm)	300 Dia.	438 x 438.	80*

\* Not including locating rings

Riser

- Shallow inspection chamber with rib design for added strength against distortion
- Effective depth is 0.4m with one riser

	A	B
Dimensions (mm)	355	440

Base

- 320mm Dia. Base incorporating 5 inlets with angled channels to aid water/waste flow (supplied with 4 bungs enabling multiple inlet options)

	A	B	C	D	E	F	G
Dimensions (mm)	478	478	325	110	320	200	130

Assembled codes are CD 300SR, CD U355 and CD U353

THE CLARK-DRAIN 450 Series

Clark-Drain provides an extensive range of cover options which connect to the 450 series chamber and all major manufacturers' 450mm PPIC chambers. 450mm Dia. Clear Opening Chamber Assembly Satisfies inverts of up to 1.2m as stated in the Building Regulations Part H.

Cover and frame

- 35kN load classification rating
- For pedestrian areas and domestic driveways
- 15° tilt action enables easy levelling on sloped surfaces
- Screw fix locking (lid to frame and frame to chamber)

Riser

- Ribbed design for added strength against distortion

Base

- 450mm Dia. base incorporating 5 inlets with angled channels to aid water/waste flow
- Supplied with 4 easy-fit bungs to block off unused inlets
- Supplied with 3 blanking plates to block unused internal channels and avoid trapped waste and odour egress

450mm Dia. Clear Opening Circular Lid Assembly



Product shown CD U4500

Product code: CD U4500 Invert elevation to maximum 1.2m (3 risers)

Product code: CD U4501 Invert elevation to maximum 0.9m (2 risers)

Product code: CD U4502 Invert elevation to maximum 0.62m (1 riser)

Circular Cover and Frame

	A/B	C/D	E
Dimensions (mm)	450 Dia.	550 Dia.	50

Riser

	A	B
Dimensions (mm)	500	340

Base

	A	B	C	D	E	F	G
Dimensions (mm)	640	640	465	110	473	300	119

Assembled codes are CD 452, CD U455 and CD U453

450mm Dia. Clear Opening Square to Round Lid Assembly



Product shown CD U4503

Product code: CD U4503 Invert elevation to maximum 1.2m (3 risers)

Product code: CD U4504 Invert elevation to maximum 0.9m (2 risers)

Product code: CD U4505 Invert elevation to maximum 0.62m (1 riser)

Square To Round Cover And Frame

	A/B	C/D	E
Dimensions (mm)	450 Dia.	560x560	80*

Riser

	A	B
Dimensions (mm)	500	340

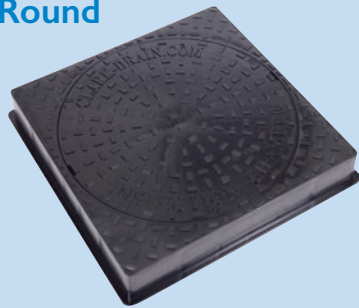
Base

	A	B	C	D	E	F	G
Dimensions (mm)	640	640	465	110	473	300	119

Assembled codes are CD 456, CD U455 and CD U453



450 Dia. Clear Opening  
Square to Round  
Cover and  
Frame



**Product code:** CD 456

**Cover and frame**

- 35kN load rating classification
- Made from polypropylene suitable for domestic driveways
- Dual locking facility
- Up to 15 degree tilt to accommodate un-level ground
- Can be rotated to fit in with the pattern of the surface finish

	A/B	C/D	E
Dimensions (mm)	450 Dia.	560 x 560	133.5*

\* Depth including locating ring. Depth of frame only is 80mm

450 Dia. Clear Opening  
Circular Cover and Frame



**Product code:** CD 452

**Cover and frame**

- 35kN load rating classification
- Made from polypropylene suitable for domestic driveways
- Dual locking facility

	A/B	C/D	E
Dimensions (mm)	450 Dia.	550 Dia.	50

456mm Dia. Clear Opening  
Recessed Retro-fit Cover and  
Frame



**Product code:** CD 470

**Cover and frame**

- Suitable for pedestrian areas
- Can be retro-fitted to disguise manhole cover with surroundings
- Recessed for infill to depth 100mm with landscaping materials (soil, gravel, etc.)
- Lifting key included

	A/B	C/D	E
Dimensions (mm)	450 Dia.	496 Dia.	140

450mm Dia. Clear Opening  
Circular Cover  
and Frame



**Product code:** CD 1657 KMB

**Cover and frame**

- B125 load rating classification
- Made from ductile iron suitable for pavements and driveways
- BS EN124:1994. BSI Kitemark Certified
- Integral lifting keyholes

	A/B	C/D	E
Dimensions (mm)	450 Dia.	546 Dia.	32

450 x 450mm Clear Opening  
Slide Out Cover  
and Frame



**Product code:** CD 761 KMB

**Cover and frame**

- B125 load rating classification
- Made from ductile iron suitable for pavements and driveways
- BS EN124:1994. BSI Kitemark Certified
- Slide out design to reduce manual handling
- Integral lifting keyholes

	A/B	C/D	E
Dimensions (mm)	450 x 450*	510 x 510	40

\*Does not connect directly onto PPIC chamber. Seating requires engineering bricks or precast concrete rings

450 x 450mm Clear Opening  
Solid Top (Double Seal) Cover  
and Frame



**Product code:** CD B400B-DSL

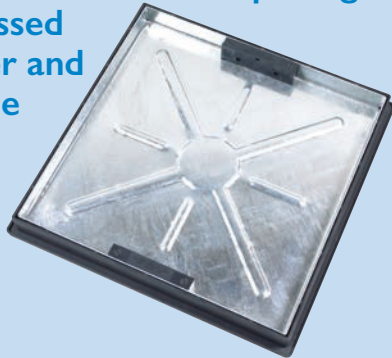
**Cover and frame**

- B125 load rating classification
- Made from ductile iron suitable for driveways
- BS EN124:1994. BSI Kitemark Certified
- Double sealed to prevent unwanted odours
- Integral lifting keyholes

	A/B	C/D	E
Dimensions (mm)	450x450*	590 x 590	40

\*Does not connect directly onto PPIC chamber. Seating requires engineering bricks or precast concrete rings

450mm Dia. Clear Opening  
Recessed  
Cover and  
Frame



**Product code:** CD 450SR/46SL

**Cover and frame**

- 5T GPW load rating classification
- Suitable for internal and external pedestrian areas
- Galvanised steel recessed cover for concrete/screed infill
- Fitted with integral lifting keys and seals

	A/B	C/D	E
Dimensions (mm)	450 Dia.	580x580	54

450mm Dia. Base



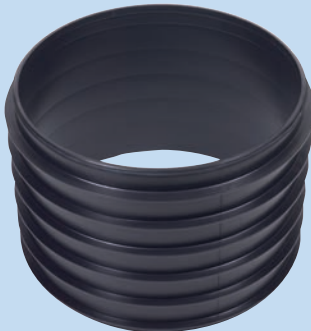
**Product code:** CD U453

**Base**

- Up to B125 (12.5 tonnes) when used with appropriate risers and manhole cover and installed to Clark-Drain guidelines
- 5-way design for system flexibility
- Supplied with blanking plates to block unused internal channels to avoid trapped waste & hence odour
- Total depth can be up to 1.2m using CD U455 risers
- Range of matching manhole covers available to suit most applications

	A	B	C	D	E	F	G
Dimensions (mm)	640	640	465	110	473	300	119

450mm Dia. Riser



**Product code:** CD U455

**Riser**

- Up to B125 (12.5 tonnes) when used with appropriate risers and manhole cover and installed to Clark-Drain guidelines
- Supplied with joint seal
- Total depth can be up to 1.2m using further CD U455 risers with matching CD U453 chamber base
- Range of matching manhole covers available to suit most applications

	A	B
Dimensions (mm)	500	340

Chamber Reducer



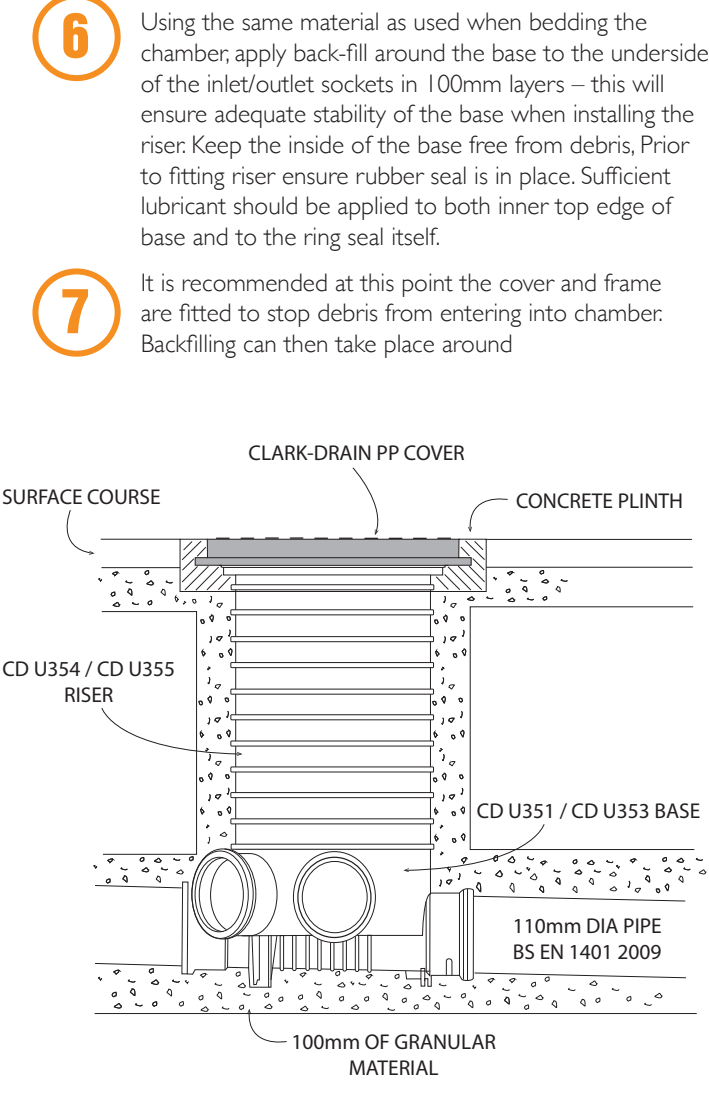
**Product code:** CD 499

- Reduces clear opening from 450mm to 350mm
- For use when invert is greater than 1.2m
- Safety device to reduce risk of entrapment as set out in Part H of the Building Regulations

# 300 Series Installation Guide

## INSTALLATION

- 1 The Clark-Drain 320mm inspection chamber can be installed up to a maximum depth of 600mm using the CD U351 or CD U353 Base & CD U354 or CD U355 Riser. Total Depth can be reduced by cutting the riser to required depth using a fine-tooth saw.
- 2 The chamber has a push-fit jointing system using a ring seal fitted around the riser to enable water testing to be carried out at depths of up to 600mm. Lubricate all seals prior to use.
- 3 Chambers should be installed on a 100mm bed of suitable as-dug or granular material. Care should be taken to ensure the bedding material is evened out under the base to give full support. Check all connections are clean and free from dirt or grit that could prevent the seals working effectively.
- 4 All unused inlets should be capped off using the provided bungs. Should more than three bungs be required contact your local Clark-Drain stockist for further supplies.
- 5 It is recommended that only pipes of 110mm O/D conforming to BS EN 1401:2009 are connected to the inlets & outlets. Pipes of smaller diameters can be connected by using an appropriate level invert reducer. Contact your Clark-Drain stockist for information.



## MAINTENANCE/CLEANING

The Clark-Drain inspection chambers can be cleaned by jet/pressure washing. When removing cover place any fixings to one side for re-use. Take care when lifting recessed covers (such as CD 450SR) filled with blocks as these may be quite heavy and always seek help if necessary.

The inside of walls and base can be cleaned with cold or hot water not exceeding 65def C. for rodding the chamber remove cover and rod in the direction of flow. 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 and risers are designed to withstand such substances and chemicals. Always ensure that excess water is "flushed" out of the chamber base in the normal direction of flow, towards the outlet pipe.

For rodding the chamber remove cover and rod in the direction of flow.

Once cleared replace cover and re-secure with original fixings.

Depending on loading class required, suitable polypropylene covers can be supplied by Clark-Drain i.e. for 15kN applications CD U352 circular cover & frame or CD U356 square-to-round cover & frame or for 35kN applications CD 300 square or CD 300SR square-to-round recessed cover & frame. All are a direct fit on Clark-Drain 320mm inspection chambers and risers.

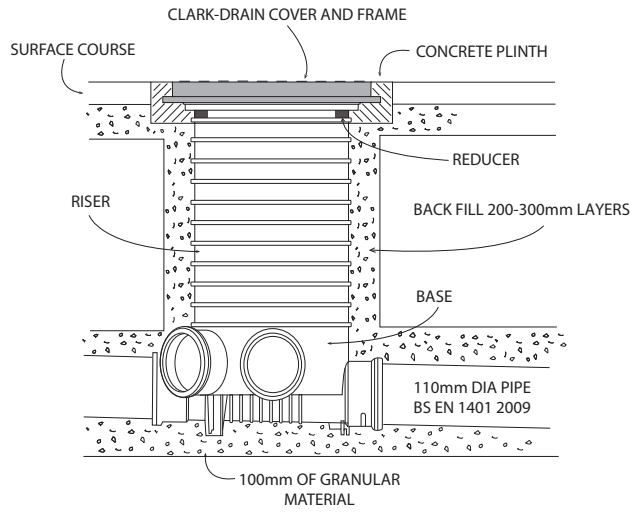
Clark-Drain accepts no responsibility for product defect or failure as a result of not following these instructions.

# 450 Series Installation Guide

## INSTALLATION

- 1 450mm inspection chambers may be used as an alternative to traditionally constructed manholes for invert depths of up to 1.2 metres.(using the CD 453 base and CD 455 Risers as supplied by your Clark-Drain stockist).
- 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 suitable 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. Use the blanking plates that are provided in unused inlets to stop waste build-ups and unwanted smells and odours. If more than 3 easy-fit bungs or blanking plates are required, please contact your local Clark-Drain stockist for further supplies.
- 6 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. Pipes of smaller diameters can be used, but correctly-specified level invert reducers must be used – contact your Clark-Drain stockist for further information.
- 8 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 provide the base with adequate stability when locating the risers. The inside of the base should again be kept free from debris.
- 9 Before a riser is installed into the base or a preceding riser section, the ring seal should be located in the recess provided – care should be taken to ensure the seal is correctly fitted and seated around the entire circumference of the riser and has no kinks. 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.
- 10 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.

- 11 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.
- 12 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 (CD 451, CD 452, CD 1657 KMB, CD 450SR or CD 450SR/46SL) is recommended as suitable covers & frames.)
- 13 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.
- 14 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.



Clark-Drain inspection chambers CD 453 and risers CD 455 are designed and manufactured to BS EN 13598-1:2010. Chambers may be filled to ground level (1.2 metres max) in isolation or as part of a pipeline or complete drainage installation.

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

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

## MAINTENANCE/CLEANING Please see instructions opposite.

Clark-Drain accepts no responsibility for product defect or failure as a result of not following these instructions.





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Due to our continual development programme, we reserve the right to upgrade products without prior notice.  
All products must be installed in accordance with Clark-Drain installation guidelines.

