PRODUCT AND INSTALLATION MANUAL

wavin OSMA

Inspection Chambers

wavin

Wavin Osma

Inspection Chambers

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Wavin Osma Chambers

Introduction

Wavin Osma
Inspection Chambers

The Non Man-Entry Inspection Chambers are designed for use in gravity drainage installations and are offered for connections to pipe diameters: 110mm, 150/160mm, 225mm and 300mm.

The Wavin Osma range of chambers offers a number of base and shaft configurations to gain access to underground drainage pipelines, giving Specifiers and Installers the freedom to choose the most suitable system for their needs. The alternatives available are:

Inspection Chambers – Shallow
For use at a maximum invert depth of 0.6 metres in Building Control applications and/or 0.9 metres in Sewers for Adoption 7 (SfA7) applications. (Multi-Base range, in Wales only)

Inspection Chambers – Deep
For use at a maximum invert depth of 1.2 metres in Building Control applications and 3.0 metres in Design & Construction Guidance (DCG) 2020 applications in England and Sewers for Adoption 7 (SfA7) applications in Wales.

Material

a) Inspection Chambers
Polypropylene is used in the manufacture of the majority of the Wavin Osma Non Man-Entry Inspection Chamber range.

b) Sealing Rings Snap-Cap-Polypropylene and Sealing Ring – TPE.

Standards

British Standards Institution

The Wavin Osma range of Non Man-Entry Inspection Chambers comply where applicable with the requirements of the following British Standards:

BS EN 124:1994 Gully tops and manhole tops for vehicular and pedestrian areas.

BS EN 13598 Parts 1 & 2 Plastics piping systems for non pressure underground drainage and sewerage.

BS 7158:2001 Plastic inspection chambers for drains and sewers – Specification.

Acceptance

The Wavin Osma range of Non Man-Entry Inspection Chambers are included in the following publication:-
- Design & Construction Guidance (DCG) 2020
- Sewers for Adoption, 7th Edition, under clause E2.31 (in Wales only).

General Information

Descriptions
Descriptions and illustrations in this publication are for guidance only. No responsibility can be accepted for any errors, omissions or incorrect assumptions. Refer to the product itself if more detailed information is required. Due to the continuing programme of product improvement, Wavin reserves the right to amend any published information or to modify any product without prior notice.

Dimensions
Unless otherwise stated all dimensions are in millimetres (mm).

Symbols
a) British Standard Kitemark
Identifies chambers which are manufactured under the B.S.I. Certification Scheme.
b) British Board of Agrément
Identifies Non-Kitemarked fittings which are covered by a British Board of Agrément Certificate.

Colour
Most Inspection Chambers – Black
Ring Seals – Black

Supply
All Wavin Osma Non Man-Entry Inspection Chambers are supplied through a nationwide network of merchant distributors. For further information contact Customer Services on 0800 038 0088.

Technical Advice
The Wavin Osma Non Man-Entry Inspection Chamber Range is backed by Wavin's comprehensive technical advice service. This is available to provide expert assistance at every stage of a project, from planning and product selection to installation and maintenance.

Contact Wavin Technical Design Department:

Tel: 0800 038 0088

Email: technical.design.uk@wavin.com or via online enquiry at wavin.co.uk

Literature
The following Wavin publications are also available from the Literature Department at Chippenham.

General
- Wavin Below Ground & Civils System: Trade Price List

Stormwater Management Systems
- Wavin AquaCell System: Product and Installation Manual
- Wavin Q-Bic Plus: Product and Installation Manual
- Wavin AquaGrid: Product and Installation Manual
- Wavin Vortex Valves: Product Overview
- Wavin Civils Channel Systems: Product and Installation Manual
- Wavin TwinWall: Product Guide

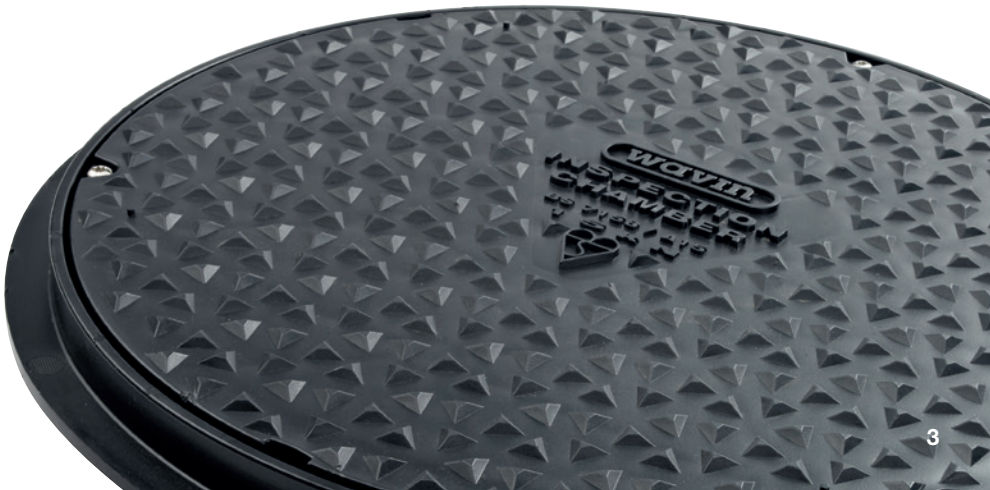
Gravity Drain and Sewer Systems
- Wavin OsmaDrain System: Product and Installation Manual
- Wavin Osma UltraRib Range: Product and Installation Manual

To request details with regards to any of the above components and/or for any technical enquires please contact:

Literature Request
Tel: 0800 038 0088
Email: customerservice.uk@wavin.com

Technical Design
Tel: 0800 038 0088
Email: technical.design.uk@wavin.com

Wavin Online
The complete range of Wavin Osma product and installation guides are also available online at: wavin.co.uk



Range Overview

Wavin Osma Chambers

The Wavin Osma Non Man-Entry Inspection Chamber Range offers a comprehensive portfolio of inspection chambers which can provide the optimum solution for every adoptable and non-adoptable situation, within the Building and Construction markets.

› See Wavin Osma Inspection Chambers – Shallow for, components complying to BS EN 13598-1 (Non adoptable chambers).
› See Wavin Inspection Chambers – Deep for, components complying to BS EN 13598-2 (Adoptable chambers) & Range 200 Chambers that comply with BS EN 13598-1 (Non adoptable chambers).

Wavin Osma Inspection Chambers – Shallow

Base Type	SIC	MBIC	UIC	NIC
Max Invert Depth (m)	0.6	0.6 – 0.9[1]	1.2	3.0[2]
Base/Shaft Dia (mm)	250	300	450	500
SfA7 Type	4	4	4	–
No of inlets 1	–	●	–	–
1 to 3	●	●	●	●
4 to 5	–	–	●	●
Inlet Sizes (mm)	110	110	110/160	110/160
Kitemarked to: BS EN 13598-1 (Non adoptable)	●	●	●	–
BS EN 7158	–	–	–	●
DCG Type	E	E	E	–

Note 1: Under SfA7 maximum permitted depth can be increased from 0.6m to 0.9m (applies in Wales only)
Note 2: Under BS 7158:2001 maximum permitted depth is 3m

Wavin Inspection Chambers – Deep

Base Type	Range 200	Range 315	Range 450	Range 600
Max Invert Depth (m)	0.6 – 2.0[1]	0.6 – 2.0[1]	1.2 – 3.0[2]	1.2 – 3.0[2]
Base/Shaft Dia (mm)	200	315	450	600
SfA7 Type	4	4	3 – 4	3 – 4
No of inlets 1	●	●	●	●
1 to 3	–	●	●	●
4 to 5	–	–	●	–
Inlet Sizes (mm)	110/160	110/160	110/160	150/225/300
Kitemarked to: BS EN 13598-1 (Non adoptable)	●	–	–	–
BS EN 13598-2	–	●	●	●
DCG Type	E	E	D	D

Note 1: Under SfA7 maximum permitted depth can be increased from 0.6m to 2.0m (applies in Wales only)
Note 2: Under SfA7 and DCG maximum permitted depth can be increased from 1.2m to 3.0m

Product and Installation details for Wavin Osma Inspection Chambers:
– Shallow are shown in the orange section of this booklet.
– Deep are shown in the blue section of this booklet.

Product Details

Wavin Osma SIC

Introduction

Description

250mm diameter PVC inspection chamber for non-adoptable applications. (Adoptable in Wales only, as compliant with Sewers for Adoption 7th edition [SfA7]).

Single unit with integral shaft, for use with 110mm Wavin OsmaDrain system.

Shaft may be cut to length to achieve required invert depth.

Applications

- For above ground access and maintenance inspection of buried pipework up to 0.6 metres deep
- For loading applications up to 15kN (1.5 Tonne)

Key Dimensions

- External shaft diameter: 250mm
- Inlets/outlets: 110mm

Key Features & Benefits

- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Shaft can be cut to required length
- No additional trench excavation required

Compliance

The Shallow Inspection Chamber complies with the following standards and regulations

- BS EN 13598-1: 2010
- Building Regulations – Part H1: Shallow only, to maximum depth 0.6m
- In Wales only, SfA7 Typical Chamber Detail – Type 4 (to max. 0.6m depth only)

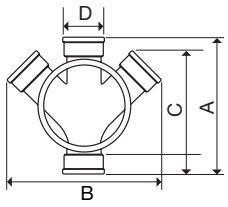
Shallow Inspection Chamber assembly

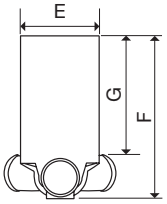
Product Details

Wavin Osma SIC

Shallow Inspection Chamber

Maximum invert depth 0.6m.





ROOT SEAL Technology

D/S Equal Shallow Inspection Chamber

- 250mm dia. base with integral shaft, incorporating straight channel and three inlets, including 2 x 45° equal branch inlets
- For use with 110mm OsmaDrain
- Supplied with two profiled blank-off plugs for unused side entries

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F	G
110	4D960	370	430	250	110	250	572	462

Cover & Frame

Round Cover & Frame

- For non-trafficked/landscaped locations
- Sealed
- For loadings up to 15kN (1.5 tonne) when supported by a concrete collar
- Can be used internally

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D325	322	308	120	92

Square Cover & Adjustable Frame

- For non-trafficked/landscaped locations
- Sealed
- For loadings up to 15kN (1.5 tonne) when supported by a concrete collar
- Can be used internally

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D961	324	308	110	30

Spares

Cover to Frame Seal

- 250mm diameter for use with 4D325 and 4D961 Covers & Frames

Material: EDPM

Nominal Size (mm)	Part Number
–	4D314

Screws

- Pack of 4 for securing 4D325/4D961 cover to its frame

Material: Metal

Nominal Size (mm)	Part Number
–	4D318

Round Cover

- Spare for use with 4D325 and 4D961 Frame

Material: Polypropylene

Nominal Size (mm)	Part Number
–	4D328

Blank-off Plugs

- For use with 4D960

Material: Polypropylene

Nominal Size (mm)	Part Number
–	4D964

Product Details

Wavin Osma MBIC

Introduction

Description

315mm diameter PVC inspection chamber for non-adoptable applications. (Adoptable in Wales only, as compliant with Sewers for Adoption 7th edition [SfA7]).

Choice of ten base configurations for use with 110mm Wavin OsmaDrain system. Ensure the correct base is selected according to the connections that are being used only.

Shaft may be assembled to required invert depth by using shaft sections 4D937.

Applications

- For above ground access and maintenance inspection of buried pipework
  - Down to 0.6m deep under Building Regulations – Part H1
  - Down to 0.9m deep under SfA7 Typical Chamber Detail – Type 4 (In Wales only)
- For loading applications up to 15kN (1.5 Tonne)

Key Dimensions

- Invert depth of base: 205mm
- External shaft diameter: 315mm
- Shaft section length: 150mm
- Inlets/outlets: 110mm

Key Features & Benefits

- Multiple options for maximum installation flexibility
- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Push-fit shaft sections: one or more can be used to achieve required invert depth
- Final shaft section can be cut to required length
- No additional trench excavation required

Compliance

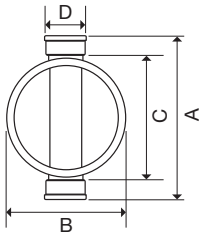
Multi-Base Inspection Chambers comply with the following standards and regulations

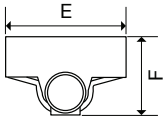
- BS EN 13598-1: 2010
- Building Regulations – Part H1: Shallow only, to maximum depth 0.6m
- In Wales only, SfA7 Typical Chamber Detail – Type 4 (to max. 0.9m depth only)

Multi-Base Inspection Chamber assembly

Multi-Base Inspection Chamber Bases

When used in non-adoptable applications, maximum invert depth 0.6m.
In Wales only, when used in adoptable applications, maximum invert depth 0.9m.



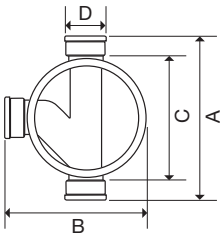


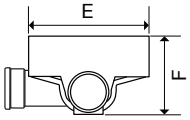
D/S Equal Shallow Inspection Chamber Base (WAJ 1)

- 315mm dia. base incorporating straight channel and single inlet
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D910	472	324	345	110	324	205



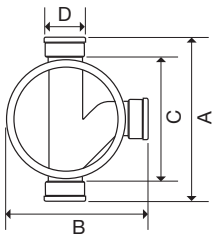


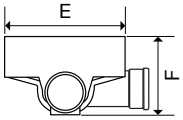
D/S Equal Shallow Inspection Chamber Base (WAJ 3)

- 315mm dia. base incorporating straight channel and two inlets including 90° left-hand equal branch inlet
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D911	472	382	345	110	324	205



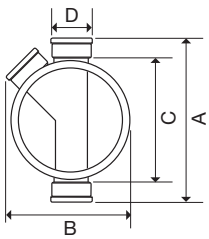


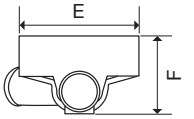
D/S Equal Shallow Inspection Chamber Base (WAJ 13)

- 315mm dia. base incorporating straight channel and two inlets including 90° right-hand equal branch inlet
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D912	472	382	345	110	324	205





D/S Equal Shallow Inspection Chamber Base (WAJ 4)

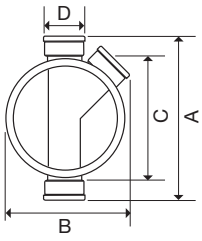
- 315mm dia. base incorporating straight channel and two inlets including 45° left-hand equal branch inlet
- For use with 110mm OsmaDrain

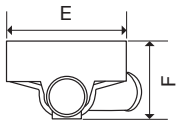
Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D913	472	349	345	110	324	205

Product Details

Wavin Osma MBIC



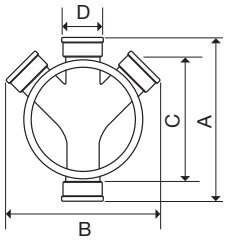


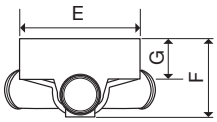
D/S Equal Shallow Inspection Chamber Base (WAJ 12)

- 315mm dia. base incorporating straight channel and two inlets including 45° right-hand equal branch inlet
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D914	472	349	345	110	324	205



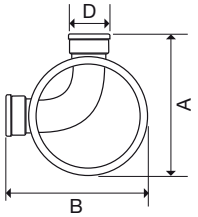


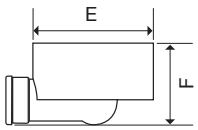
D/S Equal Shallow Inspection Chamber Base (WAJ 5)

- 315mm dia. base incorporating straight channel and 3 inlets including 2 x 45° equal branch inlets
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D917	472	374	345	110	324	205



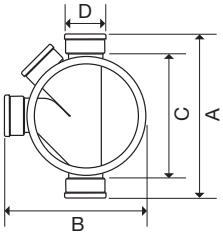


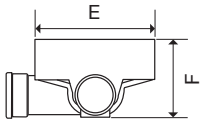
D/S Equal Shallow Inspection Chamber Base (WAJ 2)

- 315mm dia. base incorporating 90° bent channel and single inlet
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D918	385	385	–	110	324	205



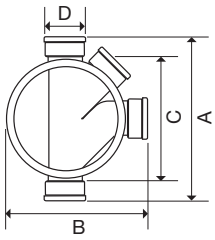


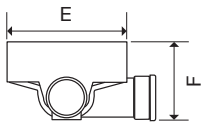
D/S Equal Shallow Inspection Chamber Base (WAJ 16)

- 315mm dia. base incorporating straight channel and three inlets including 45° and 90° left-hand equal branch inlets
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D933	472	382	345	110	324	205



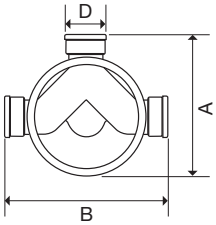


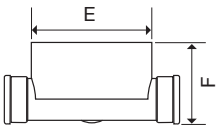
D/S Equal Shallow Inspection Chamber Base (WAJ 7)

- 315mm dia. base incorporating straight channel and three inlets including 45° and 90° right-hand equal branch inlets
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D934	472	382	345	110	324	205





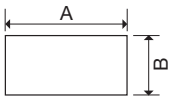
D/S Equal Shallow Inspection Chamber Base (WAJ 18)

- 315mm dia. base incorporating straight channel and three inlets including 2 x 90° equal branch inlets
- For use with 110mm OsmaDrain

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D935	472	382	345	110	324	205

Shaft



P/E Inspection Chamber Shaft

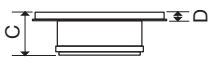
- 315mm diameter x 150mm long
- For use with all types of Multi-Base 315mm bases
- Supplied with a pre-fitted elastomeric seal

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
315	4D937	317	150*

*Dimension B = effective height

Cover & Frame



Square Cover & Adjustable Frame

- For non-trafficked/landscaped locations
- For loadings up to 15kN (1.5 tonnes) when supported by a concrete collar
- For external use only

Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D969	322	315	140	30

Product Details

Wavin Osma MBIC

Spares

Multi-Base Shaft Seal

- 315mm diameter for use with 4D937 shaft sections

Material: EPDM

Nominal Size (mm)	Part Number
–	4D957

Replacement Cover

- Spare cover for 4D969

Material: PVC

Nominal Size (mm)	Part Number
–	4D970

Replacement Screws

- Pack of 4 for securing 4D969 cover to its frame

Material: Metal

Nominal Size (mm)	Part Number
–	4D971

Product Details

Wavin Osma UIC

Introduction

Description

450mm diameter polypropylene inspection chamber for non-adoptable applications. Adoptable in Wales only as compliant with Sewers for Adoption 7th edition [SfA7].

Choice of five base configurations for equal and unequal pipe connections.

Base configurations available for use with either 110/160mm Wavin OsmaDrain or 150mm Wavin UltraRib.

Shaft may be assembled to required invert depth by using shaft sections 4D975 (maximum 1.2m).

Applications

- For above ground access and maintenance inspection of buried pipework up to 1.2 metres deep

Key Dimensions

- Height of bases:
  - 295mm [for 110mm system]
  - 270mm [for 150mm and 160mm systems]
- External shaft diameter: 450mm
- Shaft section length: 305mm
- Maximum installation depth: 1.2m

Key Features & Benefits

- Wavin Osma Universal IC seals incorporate the green RootSeal Technology that uses a scientifically proven inhibitor to suppress tree root growth to help prevent them damaging drainage systems
- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Push-fit shaft sections: one or more can be used to achieve required invert depth
- Final shaft section can be cut to required length
- No additional trench excavation required
- Square cover and frame – for use with 4D975 shaft in situations requiring loading up to 15kN (1.5 tonnes)

Compliance

Universal Inspection Chambers comply with the following standards and regulations

- BS EN 13598-1: 2010
- Building Regulations – Part H1: Shallow only, to maximum depth of 1.2m
- In Wales only, SfA7 Typical Chamber Detail – Type 4 (to max. 1.2m depth only)

Universal Inspection Chamber assembly

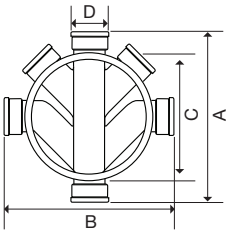
Product Details

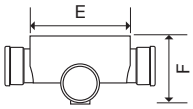
Wavin Osma UIC

ROOT SEAL Technology

Universal Inspection Chambers – 450mm Shaft

Maximum invert depth 1.2m.





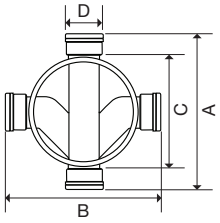
D/S Equal Inspection Chamber Base

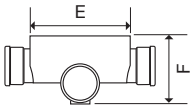
- 450mm dia. base incorporating straight channel and 5 inlets including 2 x 45° and 2 x 90° equal branch inlets
- For use with 110mm OsmaDrain
- Supplied with 3 blank-off plugs for unused side entries
- Step height for side connection = 70mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D922	595	595	470	110	476	295*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





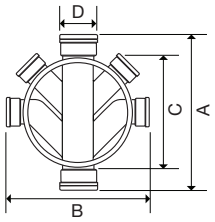
D/S Equal Inspection Chamber Base

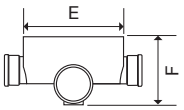
- 450mm dia. base incorporating straight channel and 3 inlets including 2 x 90° equal branch inlets
- For use with 160mm OsmaDrain
- Supplied with 1 blank-off plug for unused side entry
- Step height for side connection = 80mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
160	6D928	768	768	510	160	476	270*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





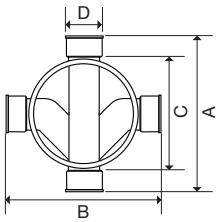
D/S UnEqual Inspection Chamber Base

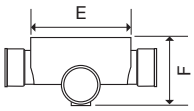
- 450mm dia. base incorporating 160mm straight channel and 5 inlets including 2 x 45° and 2 x 90° 110mm branch inlets
- For use with 110mm and 160mm OsmaDrain
- Supplied with 3 blank-off plugs for unused side entries
- Step height for side connection = 65mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
160	6D929	768	620	510	160	476	270*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





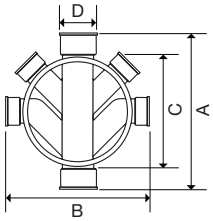
D/S Equal Inspection Chamber Base – straight channel with two 90° branches (left and right)

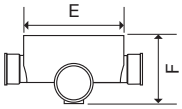
- 450mm dia. base incorporating 150mm straight channel and 3 x 150mm inlets including 2 x 90° equal branch inlets
- For use with 150mm UltraRib
- Supplied with 1 blank-off plug for unused side entry
- Step height for side connection = 80mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
150	6UR928	710	710	510	150	476	270*

*Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





ROOT SEAL Technology

D/S UnEqual Inspection Chamber Base – straight channel with four branches (two left, two right)

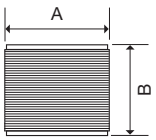
- 450mm dia. base incorporating 150mm straight channel and 4 x 110mm inlets including 2 x 45° and 2 x 90° 110mm branch inlets
- For use with 150mm UltraRib
- Supplied with 3 blank-off plugs for unused side entries
- Step height for side connection = 65mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
150	6UR929	710	620	510	150	476	270*

*Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)

Shaft



P/E Inspection Chamber Shaft

- 450mm dia. plain-ended shaft. Length: 305mm
- For use with all Universal bases
- Supplied with integral, co-injected, elastomeric seal

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
450	4D975	500	305*

*Note: dimension B = effective height

Product Details

Wavin Osma UIC

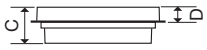
Cover & Frame Options

Round Cover & Frame – B125

- For medium duty loaded locations
- For loadings up to 125kN (12.5 tonnes) when frame is supported by a concrete plinth

Material: Ductile Iron

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D942	522	462	70	35



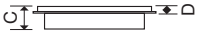
Square Cover & Frame – A15

- Used with 4D975 shaft for lightly-loaded locations
- For loadings up to 15kN (1.5 tonnes)
- Supplied with 350mm Restricted Access
- Can be suitable for loadings up to 50kN (5.0 tonnes) when frame is supported by a concrete plinth

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D920	528	462	155	64*

*Note: dimension D = fully inserted



Round Cover & Frame – A15

- Used with 4D975 shaft for lightly-loaded locations
- For loadings up to 15kN (1.5 tonnes)
- Supplied with 350mm Restricted Access

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D924	522	462	105	35*

*Note: dimension D = fully inserted

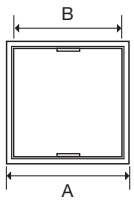
Round Cover & Frame – A15

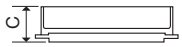
- Used with 4D975 shaft for lightly-loaded locations
- For loadings up to 15kN (1.5 tonnes)

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D927	522	462	70	35*

*Note: dimension D = fully inserted



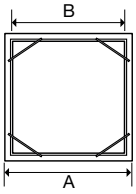


Square Recessed Cover & Frame

- Used with 4D975 shaft
- For loadings up to 25kN (2.5 tonnes) when frame is supported by a concrete plinth

Material: Steel cover/Polypropylene frame

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
–	4D945	560	520	140



Square Recessed Cover & Frame

- Used with 4D975 shaft
- Sealed
- For loadings up to 25kN (2.5 tonnes) when frame is supported by a concrete plinth
- Suitable for internal use

Material: Steel

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
–	4D946	526	515	60

Accessories

Left-hand

Right-hand

Inspection Chamber Channel Cover

- For use with 4D922 Base only
- To blank-off unused side entry

Material: Polypropylene

Nominal Size (mm)	Part Number
Left-hand	4D948
Right-hand	4D949

Cover Sealing Ring

- For sealing 4D920/4D924/4D927 to its corresponding frame

Material: EDPM

Nominal Size (mm)	Part Number
–	4D994

Product Details

Wavin Osma UIC

Spares

Inlet Blank-off Plugs

- For use with all 110mm base inlets

Material: Polypropylene

Nominal Size (mm)	Part Number
–	4D926

Screws – for 4D920

- Pack of 4 for securing 4D920 cover to its frame

Material: Stainless Steel

Nominal Size (mm)	Part Number
–	4D995

Screws – for 4D927

- Pack of 3 for securing 4D927 cover to its frame

Material: Stainless Steel

Nominal Size (mm)	Part Number
–	4D996

Eye Bolts – for 4D920

- Pack of 3 for securing 4D920 frame to its shaft

Material: Stainless Steel

Nominal Size (mm)	Part Number
–	4D997

Product Details

Wavin Osma NIC

ROOT SEAL Technology

Introduction

Description

500mm diameter polypropylene inspection chamber for non-adoptable applications.

Choice of three base configurations for equal and unequal pipe connections.

Base configurations available for use with either 110/160mm Wavin OsmaDrain or 150mm Wavin UltraRib.

Applications

- For above ground access and maintenance inspection of buried pipework
- Down to 3m deep under Building Regulations – Part H1

Key Dimensions

- External shaft diameter: 572mm

Key Features & Benefits

- Wavin Osma Non Man-Entry IC seals incorporate the green RootSeal Technology that uses a scientifically proven inhibitor to suppress tree root growth to help prevent them damaging drainage systems
- Easy to install
- Lightweight: no lifting equipment required
- Shaft can be easily cut to required length
- No additional trench excavation required

Compliance

The Non Man-Entry Inspection Chamber complies with the following standards and regulations

– BS 7158: 2001
– Building Regulations – Part H1 (maximum 3m depth)

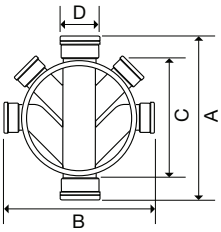
Non Man-Entry Inspection Chamber assembly

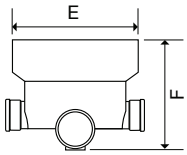
Product Details

Wavin Osma NIC

Non Man-Entry Inspection Chambers – 500mm Shaft

Used in non-adoptable applications, maximum invert depth 3m.





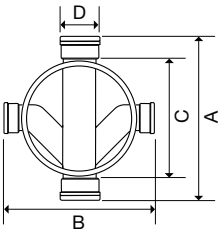
D/S Equal Inspection Chamber Base

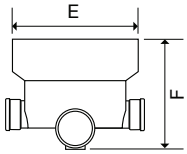
- 110mm straight channel with two 110mm x 45° and two 110mm x 90° left/right hand branch entries
- For use with 110mm OsmaDrain components
- Supplied complete with a base to shaft sealing ring and 3 blank-off plugs for use in unused side entries
- Step height for side connection = 65mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	4D923	595	595	740	110	576	449*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





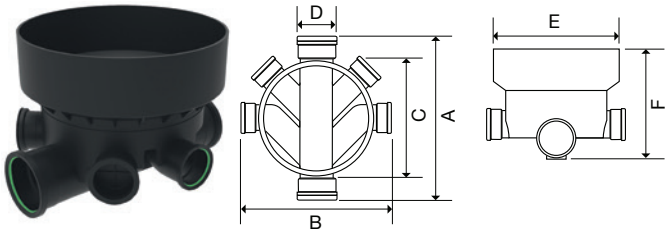
D/S Equal Inspection Chamber Base

- 160mm straight channel with two 160mm x 90° left/right hand branch entries
- For use with 160mm OsmaDrain
- Supplied complete with a base to shaft sealing ring and 1 blank-off plug for use in unused side entries
- Step height for side connection = 80mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
160	6D936	768	768	510	160	576	449*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)



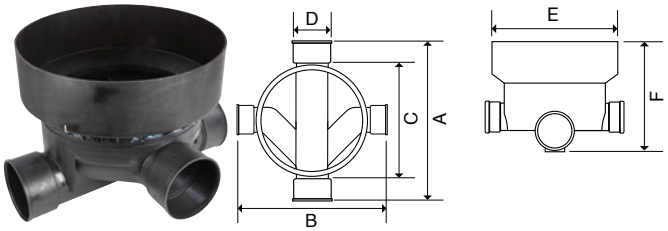
D/S UnEqual Inspection Chamber Base

- 160mm straight channel with two 110mm x 45° and two 110mm x 90° left/right hand branch entries, for use with 110mm components
- For use with 160mm OsmaDrain
- Supplied complete with a base to shaft sealing ring and 3 blank-off plugs for use in unused side entries
- Step height for side connection = 55mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
160	6D937	768	620	510	160	576	449*

*Note: dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)



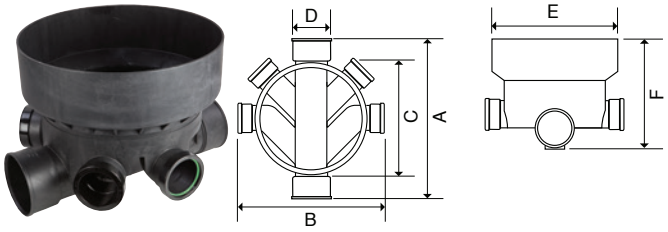
D/S Equal Inspection Chamber Base

- 150mm straight channel with two 150mm x 90° left/right hand branch entries
- For use with 150mm UltraRib components
- Supplied complete with a base to shaft sealing ring and 1 blank-off plug for use in unused side entries
- Step height for side connection = 75mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
150	6UR936	710	710	510	150	576	449*

*Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)



D/S UnEqual Inspection Chamber Base

- 150mm straight channel with two 110mm x 45° and two 110mm x 90° left/right hand branch entries, for use with 110mm components
- For use with 150mm UltraRib components
- Supplied complete with a base to shaft sealing ring and 3 blank-off plugs for use in unused side entries
- Step height for side connection = 55mm

Material: Polypropylene

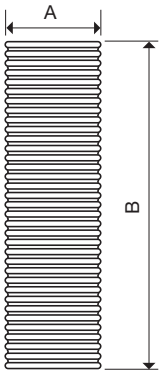
Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
150	6UR937	710	620	510	150	576	449*

*Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)

Product Details

Wavin Osma NIC

Shaft

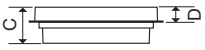


P/E Inspection Chamber Shaft

- 500mm diameter for use with all types of 500mm dia. Chamber Bases
- Shaft 1.5m or 3.0m length

Material: Recycled HDPE

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
500	6D934 ▽	572	1500
500	6D938 ▽	572	3000



Square Cover & Frame – A15

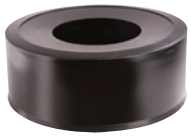
- Used with 6D934 and 6D938 shaft for lightly-loaded locations
- For loadings up to 15kN (1.5 tonnes)
- Supplied with 350mm Restricted Access
- Can be suitable for loadings up to 50kN (5.0 tonnes) when frame is supported by a concrete plinth

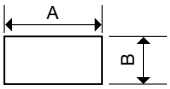
Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	4D920 ▽	528	462	155	64*

*Note: dimension D = fully inserted

Restriction Access Caps





Restriction Access Cap

- For use with 6D934/6D938 shaft sections, restricts access to 350mm, supplied with one 500mm sealing ring

Material: Polypropylene

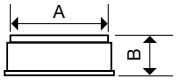
Nominal Size (mm)	Part Number	Dimensions (mm) A	B
500	6D930 ▽	586	230

Shaft to Restriction Access Cap Seal

- 500mm diameter for use with 6D930 Restriction Access Cap

Material: EPPM

Nominal Size (mm)	Part Number
500	500TW117



NIC Telescopic Adaptor

- For use with 4D920 cover and frame. Allows height adjustment and accommodation of slope. Restricted to 350mm internal diameter. Supplied with seal.

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
500	6D940	462	230

Chamber Base to Shaft Seal – spare

Material: EPPM

Nominal Size (mm)	Part Number
500	6D917 ▽

Wavin Osma SIC/MBIC

Typical Installation of 250/315mm dia. Inspection Chambers

The following is a typical summary of the installation procedures required to install the Wavin Osma 250/315mm dia Inspection Chambers.

The Shallow and Multi-Base Inspection Chamber may be installed in the same minimum trench width as required for standard 110mm drainage pipework. NO extension of trench width is required.

All elements are lightweight: may be handled/installed by a single person.

Preparation

- Prepare and compact 100mm regulating bed of 'as dug' or granular material in trench bottom

Positioning/connection

- Position Base on regulating bed. Check outlet is facing in the correct direction
- Ensure all inlets/outlet are free from dirt or grit
- In the case of the Shallow Inspection Chamber, remove profile plug(s) for the side outlets required
- Use standard jointing sequence to connect 110mm OsmaDrain pipes to inlets/outlet

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

Cutting shaft – Shallow Inspection Chamber

- Cut shaft to approximate required height, using a fine-toothed saw, using the cutting guides shown on the Chamber unit
- Chamfer the cut end to approx. 15° using plain-toothed rasp or scraper

Shaft assembly – Multi-Base Inspection Chamber

- Clean inside of Base socket and lubricate this entire area
- Position first shaft section into Base socket. Vertically push home manually
- Push-fit further shaft sections as required for invert depth. Ensure inside of each shaft section is pre-lubricated
- Cut final shaft section to approximate required height, using a fine-toothed saw. (Grooves at 30mm centres act as cutting guides)

Backfill trench

- Before starting backfill, cover top of shaft to prevent ingress of dirt or grit
- Select suitable sidefill – use 'as dug'. If not appropriate, use suitable granular material, similar to bedding material
- Avoid knocking shaft during backfilling – and keep free of debris
- Backfill to formation level. Then 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.

Figure 1: Typical installation detail: Shallow Inspection Chamber

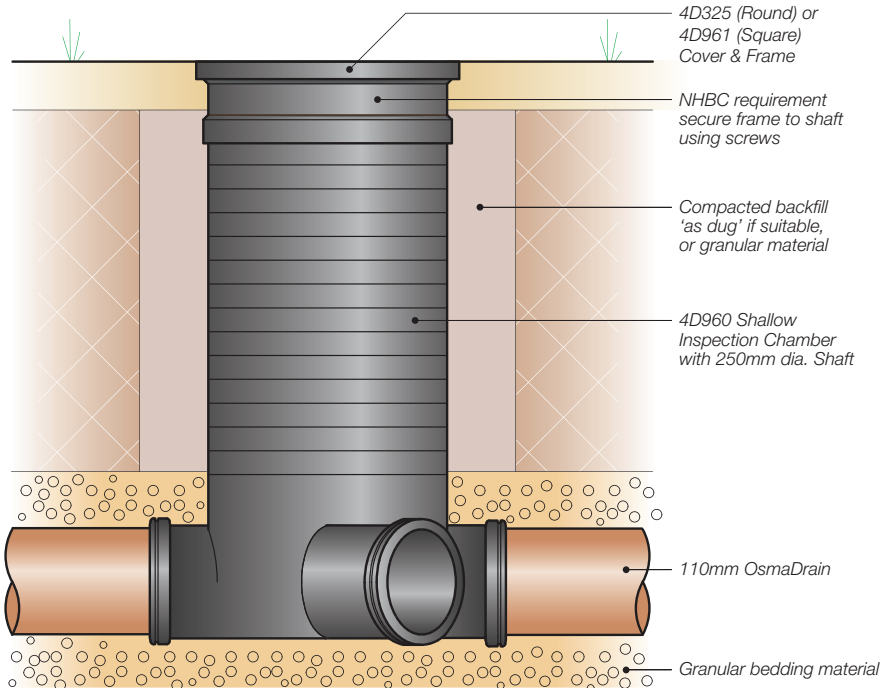
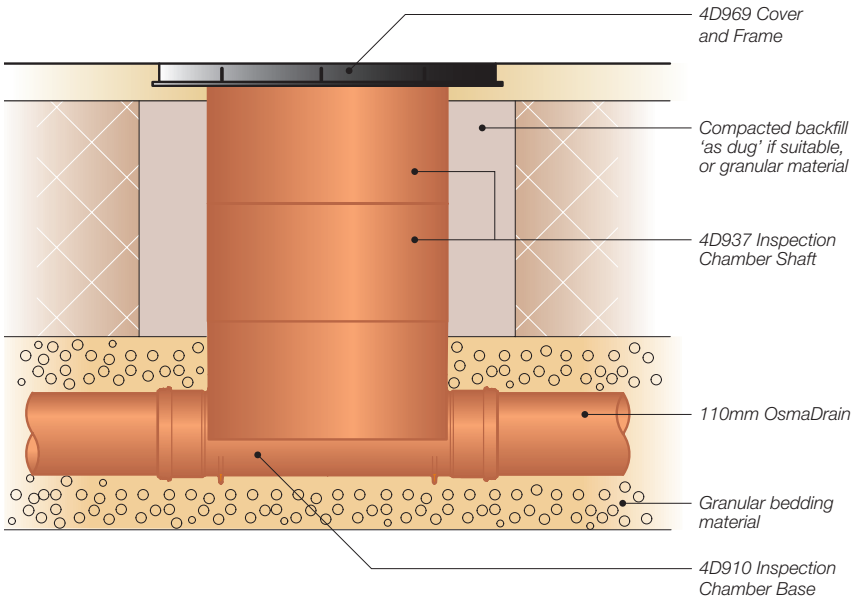


Figure 2: Typical installation detail: Multi-Base Inspection Chamber



Cover and Frame: Installation onto/into 250/315mm dia. Inspection Chambers

For green areas and pedestrian areas NOT* subject to vehicle loading (See Figures 3 & 5).

EXAMPLE: 250mm Inspection Chamber in domestic gardens

- Trim shaft section at last stage of construction. Ensure unit is at correct height. Use cutting guides shown on chamber unit
- Prepare polypropylene Cover and Frame [4D325 or 4D961] for installation onto and/or into the shaft section:

[4D325]

- Clean and lubricate outside of shaft top
- Ensure sealing ring inside the frame section is seated correctly and free from dirt and grit
- Position the cover and frame socket over the shaft and push-fit home
- Fix frame to shaft using self-tapping screws (not provided)

[4D961]

- Clean and lubricate inside of shaft top
- Ensure sealing ring located on the outside of the frame section is seated correctly and free from dirt and grit
- Position the cover and frame spigot into the shaft and push-fit home
- Fix frame to shaft using self-tapping screws (not provided)

EXAMPLE: 315mm Inspection Chamber in domestic gardens

- Trim shaft section at last stage of construction. Ensure unit is at correct height
- Lubricate inside of top shaft section
- Prepare polypropylene Cover and Frame [4D969] for installation into shaft: ensure pre-fitted ring seal is clean and not twisted
- Position the cover and frame socket into the shaft section and push home
- Fix frame to shaft using self-tapping screws (not provided)

***For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes) (See Figures 4 & 6).**

EXAMPLE: 250mm Inspection Chamber in domestic paths/patios

- Leave top 150mm of shaft clear of backfill
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft section
- Prepare polypropylene Cover and Frame [4D325 or 4D961] for installation onto and/or into the shaft section, as previously discribed

EXAMPLE: 315mm Inspection Chamber in domestic paths/patios

- Leave top 150mm of shaft clear of backfill
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber
- Lubricate inside of top shaft section
- Prepare polypropylene Cover and Frame [4D969] for installation into shaft: ensure pre-fitted ring seal is clean and not twisted
- Position the cover and frame socket into the shaft section and push home
- Fix frame to shaft using self-tapping screws (not provided)

[4D961]

- Clean and lubricate inside of shaft top
- Ensure sealing ring located on the outside of the frame section is seated correctly and free from dirt and grit
- Position the cover and frame spigot into the shaft and push-fit home
- Fix frame to shaft using self-tapping screws (not provided)

Wavin Osma SIC/MBIC

Figure 3: Installation detail – green areas (non-loaded)

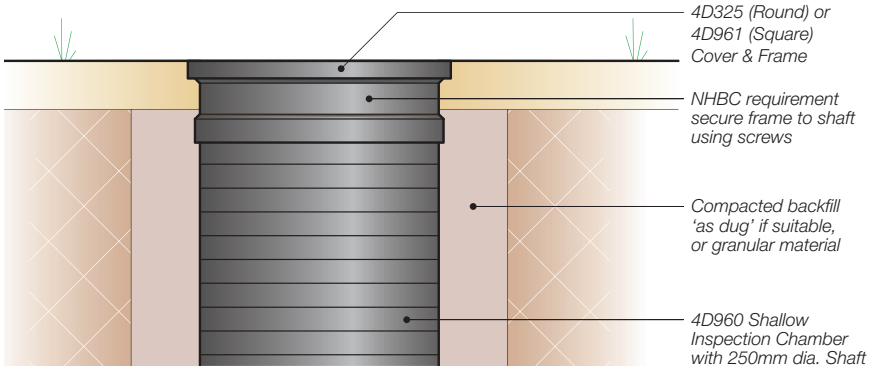


Figure 4: Installation detail Class A15 – For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes)

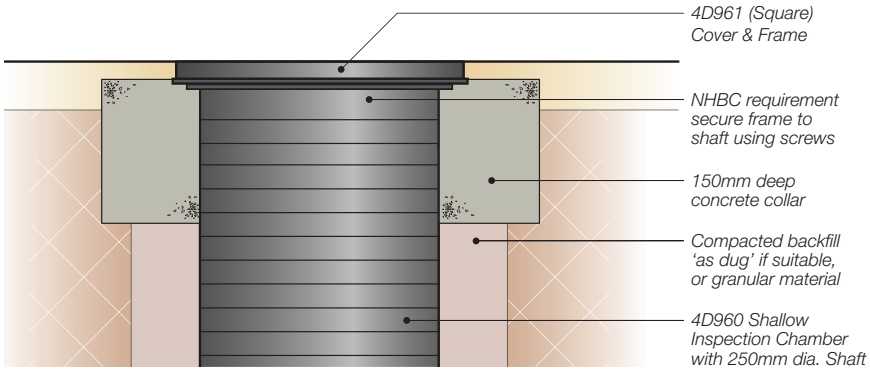


Figure 5: Installation detail – green areas (non-loaded)

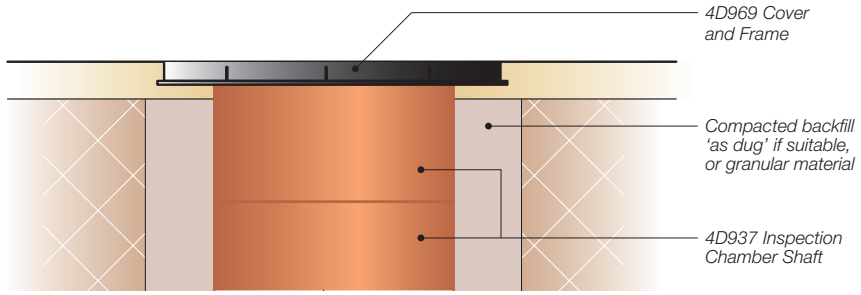
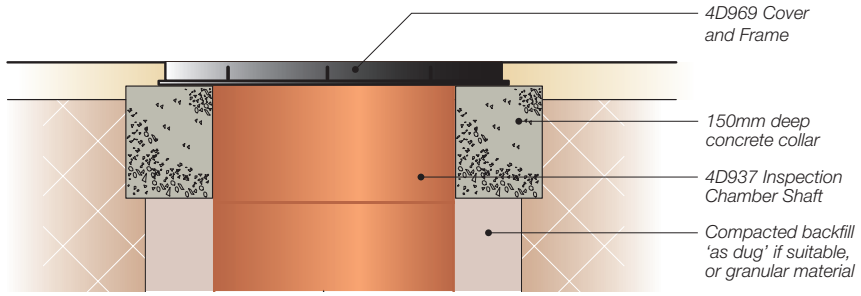


Figure 6: Installation detail Class A15 – For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes)



Wavin Osma UIC/NIC

Typical Installation of 450/500mm dia. Inspection Chamber

The following is a typical summary of the installation procedures required to install Wavin Osma 450/500mm dia. Inspection Chambers.

All elements are lightweight: may be handled/installed by a single person.

Excavation

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

Preparation

- Prepare and compact 100mm regulating bed of 'as dug' or granular material in trench bottom

Positioning

- Use standard jointing sequence to connect 110/160mm Wavin OsmaDrain or 150mm Wavin UltraRib pipes to inlets/outlets
- Push blank-off plugs externally into any unused outlet(s)

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

Shaft assembly – 450mm Inspection Chamber

- Clean inside of Base socket and lubricate this entire area
- Position first shaft section into Base socket. Vertically push home manually
- Push-fit further shaft sections as required for invert depth. Ensure inside of each shaft section is pre-lubricated
- Cut final shaft section to approximate required height, using a fine-toothed saw. (Use external rings as cutting guides)

Shaft assembly – 500mm Inspection Chamber

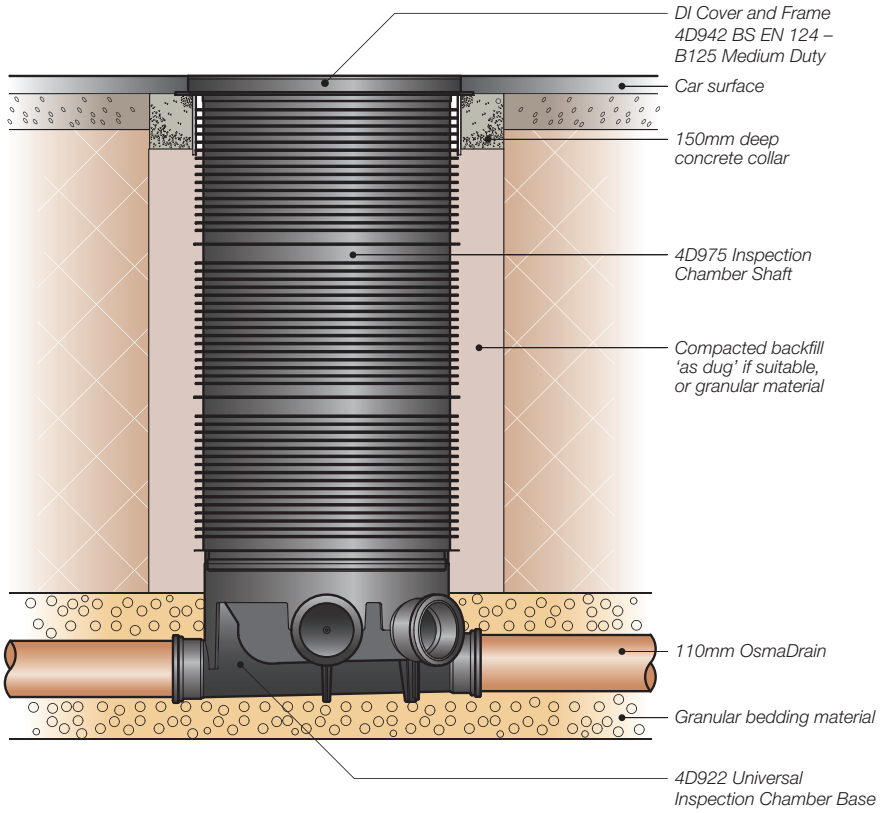
- Cut corrugated shaft to approx. Invert depth of Chamber. RECOMMENDATION: leave extra 300mm depth to allow for possible final site changes
- Locate sealing ring between 2nd and 3rd ribs from shaft bottom. Ensure ring is seated correctly/not twisted
- Clean inside of Base socket and lubricate this entire 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
- Select suitable sidefill – use 'as dug'. If not appropriate, use suitable granular material, similar to bedding material
- Avoid knocking shaft during backfilling – and keep free of debris
- Backfill to formation level. Then 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.

Figure 7: Typical installation detail: Universal Inspection Chamber



Wavin Osma UIC/NIC

Cover and Frame: Installation onto/into 450/500mm dia. Inspection Chambers

For green areas and pedestrian areas NOT* subject to vehicle loading (See Figure 8).

EXAMPLE: 450mm Inspection Chamber in domestic gardens

- Trim shaft section at last stage of construction. Ensure unit is at correct height
- Prepare selected Cover and Frame [4D920, 4D924 or 4D927] for installation into shaft
- Position the cover and frame spigot into the shaft section
- Fix frame to shaft using self-tapping screws

EXAMPLE: 500mm Inspection Chamber in domestic gardens

- Trim shaft section at last stage of construction
- Prepare NIC Telescopic Adaptor (6D940), position over top of shaft and push fully home
- Prepare selected Cover and Frame [4D920]
- Position the cover and frame spigot into the Telescopic Adaptor
- Fix frame to adaptor using the eyebelts provided

***For A15 applications subject to occasional loading up to 15kN (1.5 tonnes) (See Figure 9).**

EXAMPLE: 450/500mm Inspection Chambers domestic paths/patios

- 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 selected Cover and Frame [4D920, 4D924 or 4D927] for installation into shaft
- Position the cover and frame spigot into the shaft section
- Fix frame to shaft using self-tapping screws

For B125 applications subject to medium duty loading up to 12.5kN (12.5 tonnes) (See Figure 10).

EXAMPLE: 450/500mm Inspection Chambers in 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
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber with minimum opening 500mm x 500mm – or 500mm diameter – to ensure that any loads are distributed away from the shaft
- On top of slab, construct Class B engineering brickwork OR concrete blocks OR pre-cast concrete seating rings up to required height
- According to required loading application, position Ductile Iron B125 Cover and Frame or D400 Cover and Frame on top of slab

Figure 8: Installation detail – green areas (non-loaded)

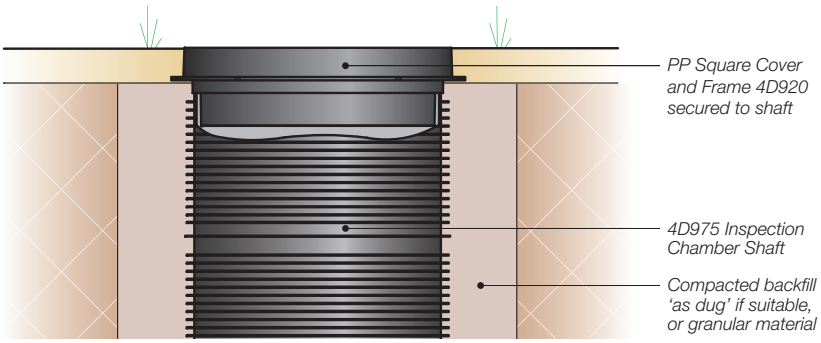
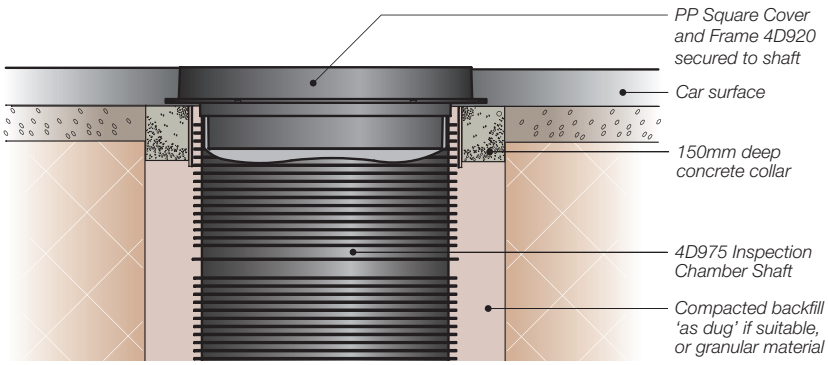
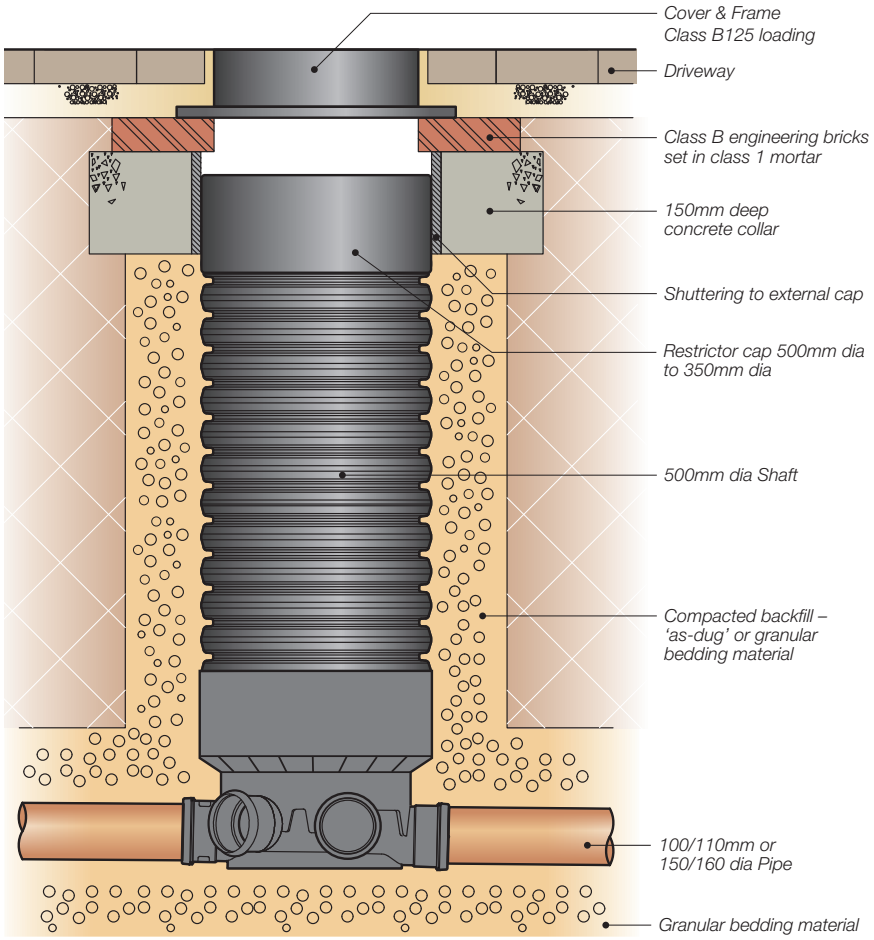


Figure 9: Installation detail Class A15 – areas subject to occasional vehicle loading up to 15kN (up to 5 tonnes when supported with a concrete plinth). For heavier vehicles (ie. Electric vehicles, 4x4s, pick-up trucks & vans), B125 cover should be used



4D920 up to 5 tonnes when supported with a concrete plinth

Figure 10: Typical installation detail: 500mm dia Inspection Chamber



Product Details

Wavin Range 200 IC

Introduction

Description

200mm diameter polypropylene inspection chamber for non-adoptable applications. Adoptable in Wales only as compliant with Sewers for Adoption 7th edition [SfA7].

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

200mm diameter shaft may be cut to length to achieve required invert down to a maximum of 2 metres.

Applications

- For above ground access and maintenance inspection of buried pipework down to 2 metres deep
- For loading applications:
  - A15 (1.5 tonnes)
  - B125 (12.5 tonnes) *
  - D400 (40 tonnes) *

* With cover & frame supported by concrete plinth (supplied by others)

Key Dimensions

- Invert depth of base:
  - 430mm [for 110mm system]
  - 450mm [for 160mm system]
- External shaft diameter: 200mm
- Shaft length: 2m
- Maximum installation depth: 2m

Key Features & Benefits

- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Reinforcing ribs on underside to withstand groundwater pressure
- Shaft can be cut to required length
- No additional trench excavation required

Compliance

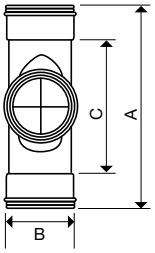
Range 200 chambers comply with the following standards and regulations

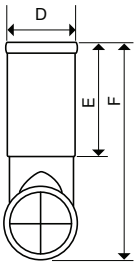
- BS EN 13598-1: 2010
- Building Regulations – Part H1: Shallow only to maximum depth 0.6m
- In Wales only, SfA7 Typical Chamber Detail – Type 4: (Non-entry. Maximum depth from cover level to soffit of pipe: 2m)

Range 200 Inspection Chamber assembly

Base

When used in adoptable applications (in Wales only), maximum invert depth 2m.





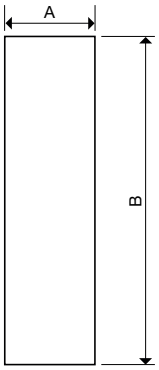
D/S Equal Inspection Chamber Base

- 200mm dia. base incorporating straight channel and single inlet
- For use with 110/160mm plastic pipework systems
- Also for use with 150mm UltraRib, using Adaptor 6UR141

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F
110	24NE300 ▽	470	110	339	200	210	455
160	26NE300 ▽	525	160	350	200	210	475

Shaft



P/E Inspection Chamber Shaft

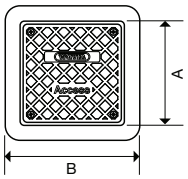
- 200mm dia. plain-ended shaft
- Length: 2 metres
- For use with Range 200 bases 24NE300 and 26NE300

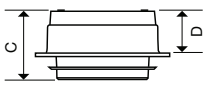
Material: PVC

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
–	20NE002	200	2000*

* Dimension B = effective height

Cover & Frame





Square Cover & Frame – A15

- For non-trafficked/landscaped locations
- Sealed
- For loadings up to 15kN (1.5 tonnes) when supported by a concrete plinth

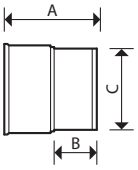
Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	20NE015	183	233	120	80

Product Details

Wavin Range 200 IC

Accessories



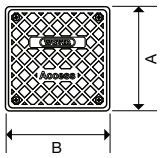
Adaptor for Wavin UltraRib Pipe

- For connecting 150mm UltraRib pipe to chamber base 26NE300

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
150	6UR141	180	84	160

Spares



Square Cover

- Spare for use with 20NE015 frame

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
–	20NE203	167	167

Screws

- Pack of 4 for securing 20NE015 cover to its frame

Nominal Size (mm)	Part Number
–	4D318

Product Details

Wavin Range 315 IC

Introduction

Description

315mm diameter polypropylene inspection chambers for adoptable and non-adoptable applications. For adoptable situations, compliant with Design & Construction Guidance (DCG) 2020 in England and Sewers for Adoption 7th edition [SfA7] in Wales.

Choice of eight base configurations for equal pipe connections.

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

315mm diameter shaft may be cut to length to achieve required invert down to a maximum of 2 metres.

Applications

- For above ground access and maintenance inspection of buried pipework down to 2 metres deep
- For loading applications:
  - A15 (1.5 tonnes)
  - B125 (12.5 tonnes) *
  - D400 (40 tonnes) *

* With cover & frame supported by concrete plinth

Key Dimensions

- Invert depth of base:
  - 238mm [for 110mm system]
  - 290mm [for 160mm system]
- External shaft diameter: 348mm
- Shaft length: 2m
- Maximum installation depth: 2m

Key Features & Benefits

- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Reinforcing ribs on underside to withstand groundwater pressure
- Shaft can be cut to required length
- No additional trench excavation required

Compliance

Range 315 chambers comply with the following standards and regulations

- BS EN 13598-2: 2009
- DCG 2020 Chamber Detail – Type E (Maximum depth to 2m)
- SfA7 Typical Chamber Detail – Type 4: (Non-entry. Maximum depth from cover level to soffit of pipe: 2m)
- Building Regulations – Part H1: Shallow only to maximum depth 0.6m

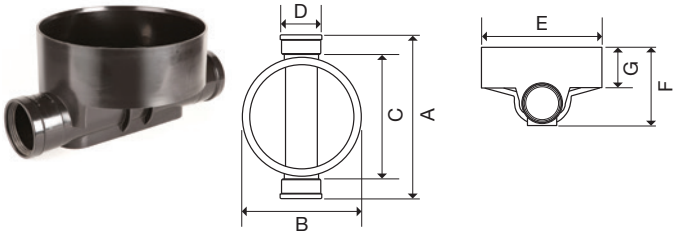
Range 315 Inspection Chamber assembly

Product Details

Wavin Range 315 IC

Bases

All Range 315 bases are supplied with a base-to-shaft sealing ring.
When used in adoptable applications, maximum invert depth 2m.



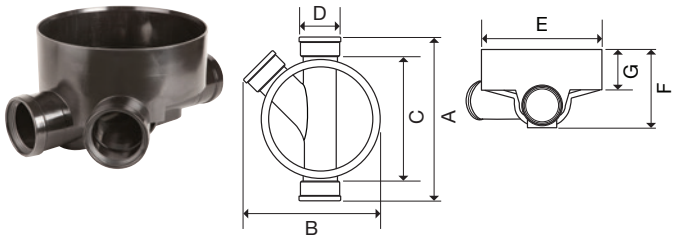
D/S Equal Inspection Chamber Base

- 315mm dia. base incorporating straight channel and single inlet
- For use with 110/160mm plastic pipework
- Also for use with 150mm UltraRib, using Adaptor 6UR141

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F	G
110	34NE300 ▽	514	369	387	110	357	238*	103
160	36NE300 ▽	564	369	391	160	357	290*	103

* Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)



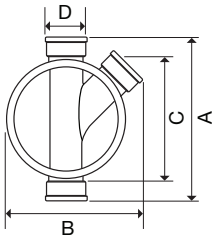
D/S Equal Inspection Chamber Base

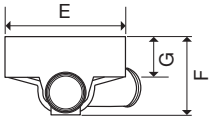
- 315mm dia. base incorporating straight channel and 2 inlets, including 45° left-hand equal branch inlet
- For use with 110/160mm plastic pipework
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm or 160mm side connection = 20mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F	G
110	34NE301 ▽	514	424	387	110	357	238*	103
160	36NE301 ▽	564	495	391	160	357	290*	103

* Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





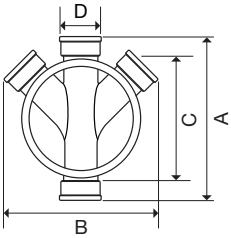
D/S Equal Inspection Chamber Base

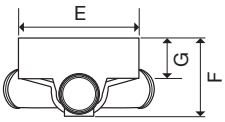
- 315mm dia. base incorporating straight channel and 2 inlets, including 45° right-hand equal branch inlet
- For use with 110/160mm plastic pipework
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm or 160mm side connection = 20mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F	G
110	34NE302 ♢	514	424	387	110	357	238*	103
160	36NE302 ♢	564	495	391	160	357	290*	103

* Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)





D/S Equal Inspection Chamber Base

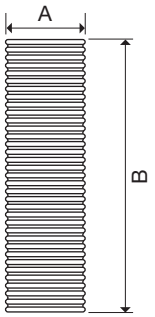
- 315mm dia. base incorporating straight channel with 3 inlets, including 2 x 45° equal branch inlets
- For use with 110/160mm plastic pipework
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm or 160mm side connection = 20mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E	F	G
110	34NE303 ♢	514	479	387	110	357	238*	103
160	36NE303 ♢	564	622	391	160	357	290*	103

* Dimension F = height at centre point of base (all bases have a 1.5° inlet-to-outlet fall)

Shaft



P/E Inspection Chamber Shaft

- 315mm dia. plain-ended corrugated shaft
- Length: 2 metres
- For use with all Range 315 bases

Material: PE

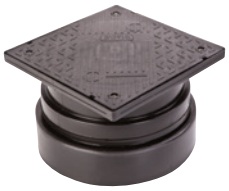
Nominal Size (mm)	Part Number	Dimensions (mm) A	B
315	30NE002	348	2000*

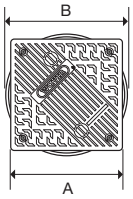
* Dimension B = effective height

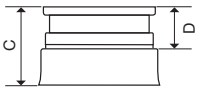
Product Details

Wavin Range 315 IC

Cover & Frame







Square Cover & Frame – A15

- For non-trafficked/landscaped locations
- Sealed
- For loadings up to 15kN (1.5 tonnes) when supported by a concrete plinth

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D
–	30NE015	347	370	267	135

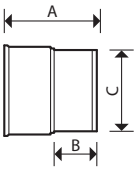
Accessories

Connector Kit

- For connecting 110/160mm plastic pipework to Range 315 Inspection Chamber shaft

Material: PVC-U

Nominal Size (mm)	Part Number
110	NE950
160	NE960



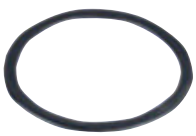
Adaptor for Wavin UltraRib Pipe

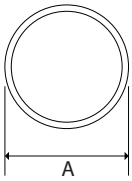
- For connecting 150mm UltraRib pipe to all Range 315 Inspection Chamber bases

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
150	6UR141	180	84	160

Spares



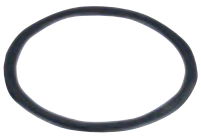


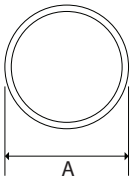
Chamber Base to Shaft Seal

- 315mm diameter for use with 30NE002 – at foot of shaft

Material: EPDM

Nominal Size (mm)	Part Number	Dimensions (mm) A
–	30NE200	315



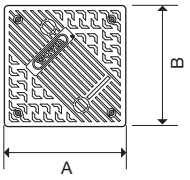


Cover & Frame Seal to Shaft

- 315mm diameter for use with 30NE002 – at top of shaft

Material: EPDM

Nominal Size (mm)	Part Number	Dimensions (mm) A
–	12TW217	315



Square Cover

- Spare for use with 30NE015 frame

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
–	30NE203	335	335

Screws

- Pack of 4 for securing 30NE203 cover to its frame

Nominal Size (mm)	Part Number
–	30NE205

Product Details

Wavin Range 450 IC

Introduction

Description

450mm diameter polypropylene inspection chamber for adoptable and non-adoptable applications. For adoptable situations, compliant with Design & Construction Guidance (DCG) 2020 in England and Sewers for Adoption 7th edition [SfA7] in Wales.

Choice of eight bases for equal and unequal pipe connections.

Dedicated bases for use directly with either 110/160mm plastic pipework or 150mm Wavin 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

- Wavin Range 450 IC seals incorporate the green RootSeal Technology that uses a scientifically proven inhibitor to suppress tree root growth to help prevent them damaging drainage systems
- Full range of dedicated bases, ensure that smooth flow can be achieved
- Quick & easy to install, with a sculptured neck 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

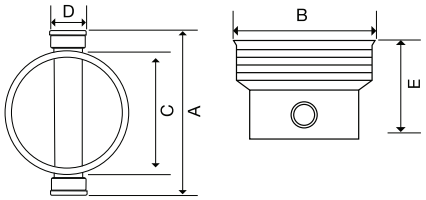
Range 450 chambers comply with the following standards and regulations

- BS EN 13598-2: 2009
- DCG 2020 Chamber Detail – Type D (Maximum depth to 3m)
- 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 (maximum 3m depth)

Range 450 Inspection Chamber assembly

Bases – For use with 110mm plastic pipework

All Range 450 bases are supplied with a base-to shaft sealing ring.
When used in adoptable applications, maximum invert depth 3m.

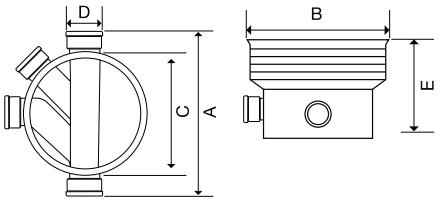


D/S Equal Inspection Chamber Base

- 450mm dia. base straight channel and single inlet

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
110	44NE300 ♈	614	570	500	110	501

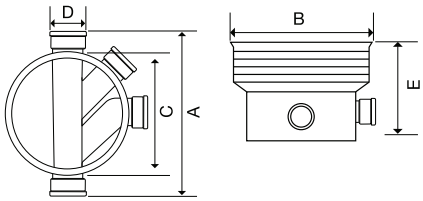


D/S Equal Inspection Chamber Base

- 450mm dia. base incorporating straight channel with 3 inlets, including 1 x 45˚ and 1 x 90˚ left-hand, equal branch inlets
- Supplied with 1 x 110mm blank-off plug
- Step height for side connection = 50mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
110	44NE304 ♈	614	570	500	110	501

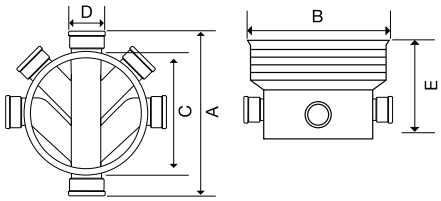


D/S Equal Inspection Chamber Base

- 450mm dia. base incorporating straight channel with 3 inlets, including 1 x 45˚ and 1 x 90˚ right-hand, equal branch inlets
- Supplied with 1 x 110mm blank-off plug
- Step height for side connection = 50mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
110	44NE305 ♈	614	570	500	110	501



D/S Equal Inspection Chamber Base

- 450mm dia. base incorporating straight channel with 5 inlets, including 2 x 45˚ and 2 x 90˚ left/right-hand, equal branch inlets
- Supplied with 3 x 110mm blank-off plugs
- Step height for side connection = 50mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
110	44NE306 ♈	614	570	500	110	501

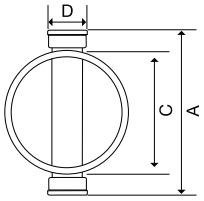
Product Details

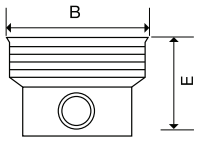
Wavin Range 450 IC

ROOT SEAL Technology

Bases – For use with 160mm plastic pipework

All Range 450 bases are supplied with a base-to shaft sealing ring.
When used in adoptable applications, maximum invert depth 3m.



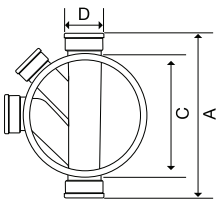


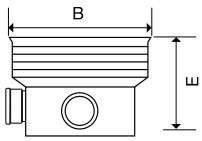
D/S Equal Inspection Chamber Base

- 450mm dia. base straight channel and single inlet
- Also for use with 150mm UltraRib, using Adaptor 6UR141

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
160	46NE300 ▽	644	570	500	160	501



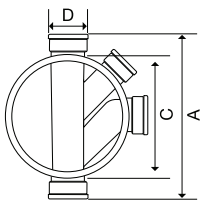


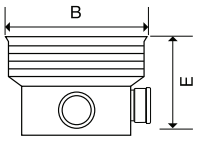
D/S UnEqual Inspection Chamber Base

- 450mm dia. base incorporating 160mm straight channel with 3 inlets, including a 110mm x 45° and a 160mm x 90° left-hand, equal branch inlets
- Supplied with 1 x 110mm blank-off plug
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm side connection = 50mm
- Step height for 160mm side connection = 70mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
160	46NE307 ▽	644	570	500	160	501



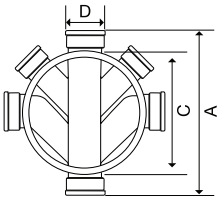


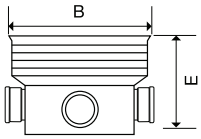
D/S UnEqual Inspection Chamber Base

- 450mm dia. base incorporating 160mm straight channel with 3 inlets, including a 110mm x 45° and a 160mm x 90° right-hand, equal branch inlets
- Supplied with 1 x 110mm blank-off plug
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm side connection = 50mm
- Step height for 160mm side connection = 70mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
160	46NE308 ▽	644	570	500	160	501





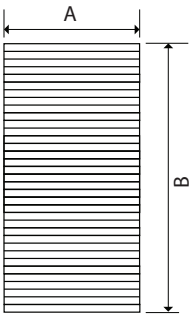
D/S UnEqual Inspection Chamber Base

- 450mm dia. base incorporating 160mm straight channel with 5 inlets, including 2 110mm x 45° and 2 160mm x 90° left/right-hand, equal branch inlets
- Supplied with 2 x 110mm and 1 x 160mm blank-off plugs
- Also for use with 150mm UltraRib, using Adaptor 6UR141
- Step height for 110mm side connection = 50mm
- Step height for 160mm side connection = 70mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
160	46NE309 ▽	644	570	500	160	501

Shaft



P/E Inspection Chamber Shaft

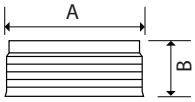
- 450mm dia. plain-ended corrugated shaft
- Length: 3 metres
- For use with all Range 450 bases

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
450	40NE300	515	3000*

* Dimension B = effective height

Restriction Access Cap



Restriction Access Cap

- For use with 40NE300 shaft
- Restricts access to 350mm
- Supplied with one 450mm sealing ring

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
450	40NE930	577	265

Product Details

Wavin Range 450 IC

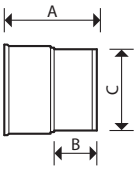
Accessories

Connector Kit

- For connecting 110/160mm plastic pipework to Range 450 Inspection Chamber shaft

Material: PVC-U

Nominal Size (mm)	Part Number
110	NE950
160	NE960



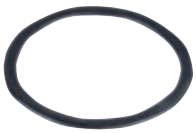
Adaptor for Wavin UltraRib Pipe

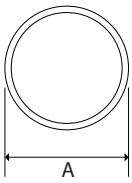
- For connecting 150mm UltraRib pipe to all Range 450 Inspection Chamber bases

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C
150	6UR141	180	84	160

Spares





Chamber Base to Shaft Seal

- 450mm diameter for use with 40NE300 – at foot of shaft

Material: EPDM

Nominal Size (mm)	Part Number	Dimensions (mm) A
–	450TW117	450

Product Details

Wavin Range 600 IC

Introduction

Description

600mm diameter polypropylene inspection chamber for adoptable and non-adoptable applications. For adoptable situations, compliant with Design & Construction Guidance (DCG) 2020 in England and Sewers for Adoption 7th edition [SfA7] in Wales.

Choice of twelve bases for equal pipe connections.

For use directly with 150mm, 225mm and 300mm Wavin UltraRib system.

600mm diameter shaft may be cut to length to achieve required invert down to a maximum of 3m (adoptable), 5m (non-adoptable).

Applications

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

* With cover & frame supported by concrete plinth

Key Dimensions

- Invert depth of base:
  - 646mm [for 150mm system]
  - 705mm [for 225mm and 300mm systems]
- External shaft diameter: 683mm
- Shaft length: 3m
- Maximum installation depth: 3m

Key Features & Benefits

- Fast, easy installation: no wet trades
- Lightweight: no lifting equipment required
- Reinforced base plate to withstand groundwater pressure
- Shaft can be cut to required length
- All inlets and outlet sockets allow ≤7.5° movement in all directions

Compliance

Range 600 chambers comply with the following standards and regulations

- BS EN 13598-2: 2009
- DCG 2020 Chamber Detail – Type D (Maximum depth to 3m
- 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 (maximum 5m depth)

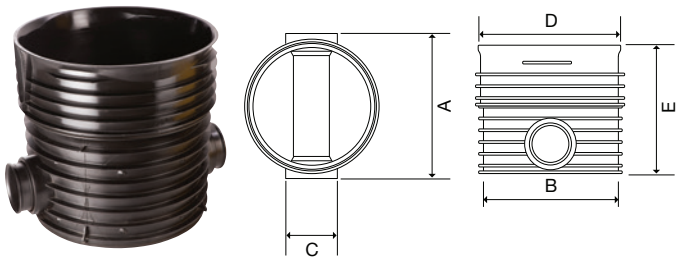
Range 600 Inspection Chamber assembly

Product Details

Wavin Range 600 IC

Bases

All Range 600 bases are supplied with a base-to shaft sealing ring.
When used in adoptable applications, maximum invert depth 3m.

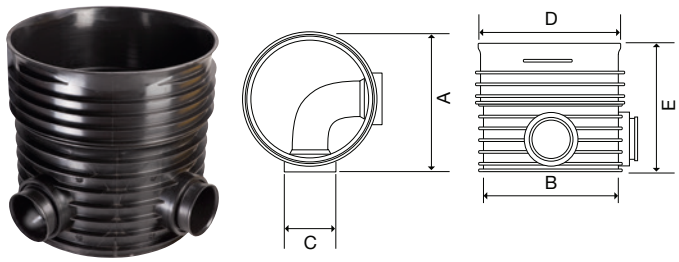


D/S Equal Inspection Chamber Base

- 600mm dia. base straight channel and single inlet
- For use with 150mm, 225mm and 300mm UltraRib
- Also for connection to 150mm, 225mm and 300mm TwinWall using Adaptors 6TW145 (with 150 Base), 9TW145 (with 225 Base) or 12TW145 (with 300 Base)

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
150	66NE300 ▽	845	720	150	750	646
225	69NE300 ▽	845	720	225	750	705
300	612NE300 ▽	845	720	300	750	705

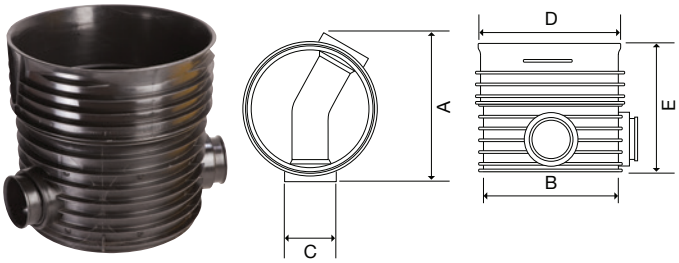


D/S Equal Inspection Chamber Base

- 600mm dia. base incorporating bent 90˚ channel and single inlet
- For use with 150mm, 225mm and 300mm UltraRib
- Also for connection to 150mm, 225mm and 300mm TwinWall using Adaptors 6TW145 (with 150 Base), 9TW145 (with 225 Base) or 12TW145 (with 300 Base)

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
150	66NE314 ▽	798	720	150	750	646
225	69NE314 ▽	798	720	225	750	705
300	612NE314 ▽	798	720	300	750	705

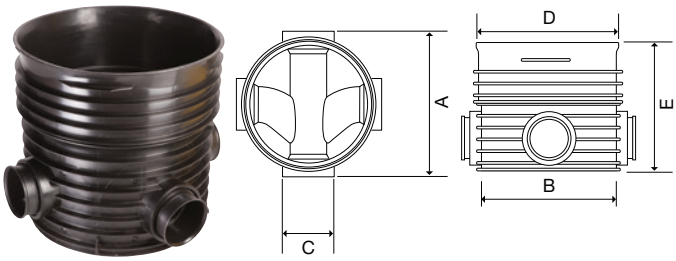


D/S Equal Inspection Chamber Base

- 600mm dia. base incorporating bent 30˚ channel and single inlet
- For use with 150mm, 225mm and 300mm UltraRib
- Also for connection to 150mm, 225mm and 300mm TwinWall using Adaptors 6TW145 (with 150 Base), 9TW145 (with 225 Base) or 12TW145 (with 300 Base)

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
150	66NE315 ▽	845	720	150	750	646
225	69NE315 ▽	845	720	225	750	705
300	612NE315 ▽	845	720	300	750	705



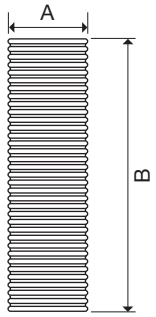
D/S Equal Inspection Chamber Base

- 600mm dia. base incorporating straight channel and three inlets including 2 x 90° equal branch inlets
- For use with 150mm, 225mm and 300mm UltraRib
- Also for connection to 150mm, 225mm and 300mm TwinWall using Adaptors 6TW145 (with 150 Base), 9TW145 (with 225 Base) or 12TW145 (with 300 Base)
- Step height for side connection = 30mm

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B	C	D	E
150	66NE316 ▽	845	720	150	750	646
225	69NE316 ▽	845	720	225	750	705
300	612NE316 ▽	845	720	300	750	705

Shaft



P/E Inspection Chamber Shaft

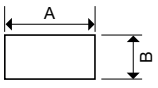
- 600mm dia. plain-ended corrugated shaft
- Length: 3 metres
- For use with all Range 600 bases

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
600	60NE003	683	3000*

* Dimension B = effective height

Restriction Access Cap



Restriction Access Cap

- For use with 60NE300 shaft
- Restricts access to 350mm
- Supplied with one 600mm sealing ring

Material: Polypropylene

Nominal Size (mm)	Part Number	Dimensions (mm) A	B
600	60NE930	704	270

Product Details

Wavin Range 600 IC

Accessories

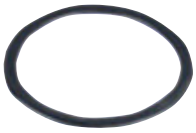
Connector Kit

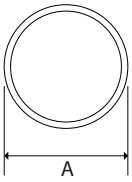
- For connecting 110/160mm plastic pipework to Range 600 Inspection Chamber shaft

Material: PVC-U

Nominal Size (mm)	Part Number
110	NE950
160	NE960

Spares





Chamber Base to Shaft Seal

- 600mm diameter for use with 60NE003 – at foot of shaft

Material: EPDM

Nominal Size (mm)	Part Number	Dimensions (mm) A
–	600TW117	600

Wavin Range 200 IC

Range 200 Chamber and Shaft

NOTE: The following is a summary of installation procedures following selection of a suitable Range 200 Base.

The Range 200 inspection chamber may be installed in the same minimum trench width as required for standard 110mm or 160mm drainage pipework. NO extension of trench width is required.

All elements are lightweight: may be handled/installed by a single person.

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

NOTE: On 24NE300/26NE300 Straight Bases, a flow indication arrow is inscribed

- Ensure all inlets/outlet are free from dirt or grit
- If connecting to 150mm UltraRib, insert the appropriate adaptors into the required inlet/outlet as follows:
  - 150mm UltraRib use Adaptor 6UR141
- Bends up to 45˚ may be used on inlet and 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

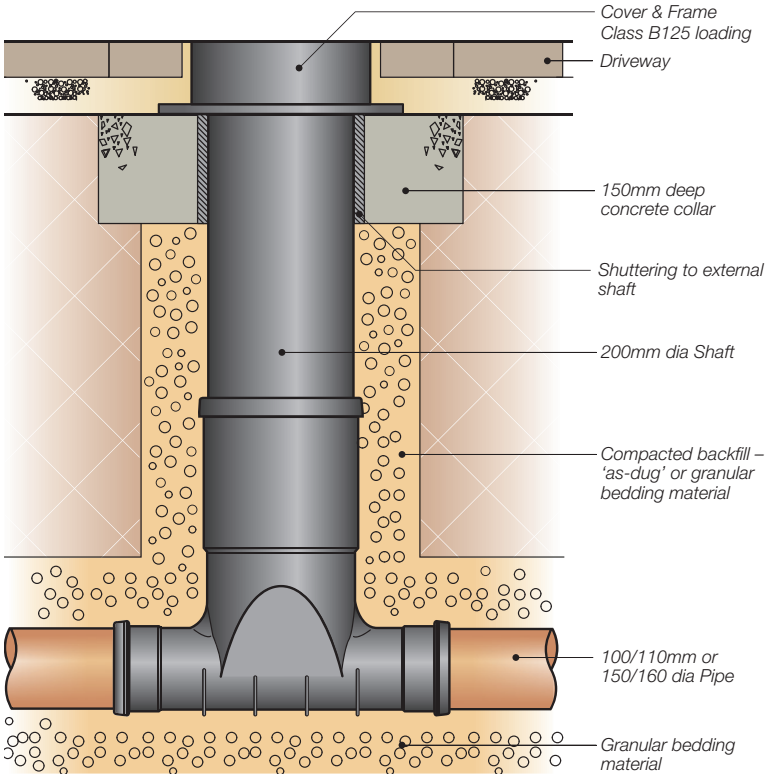
- Cut shaft to approx. Invert depth of Chamber. RECOMMENDATION: leave extra 300mm depth to allow for possible final site changes
- Clean inside of Base socket
- Clean and lubricate entire spigot end of shaft to be inserted
- Position shaft at 45˚ angle into Base socket. Vertically push home manually 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

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

Figure 11: Typical installation detail: Range 200 Inspection Chamber Type 4



Wavin Range 200 IC

A15 Cover and Frame

A15 polypropylene cover and frames

20NE015 uses a dual fixing system for additional safety. The cover is pre-fixed to the frame using screws.

RECOMMENDATION: use self-tapping screws [not supplied] to secure the frame to the shaft.

For installation in areas not subject to loading, such as domestic gardens, no concrete plinth support is required (See Figure 12).

For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes). For A15 applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes) not including domestic driveways, the frame should be supported by a concrete plinth (See Figure 13).

Installation procedures:

For green areas and pedestrian areas NOT* subject to vehicle loading (See Figure 12)

EXAMPLE: domestic gardens

- Trim shaft section at last stage of construction. Ensure unit is at correct height

***For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes) (See Figure 13)**

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

Figure 12: Installation detail – green areas (non-loaded)

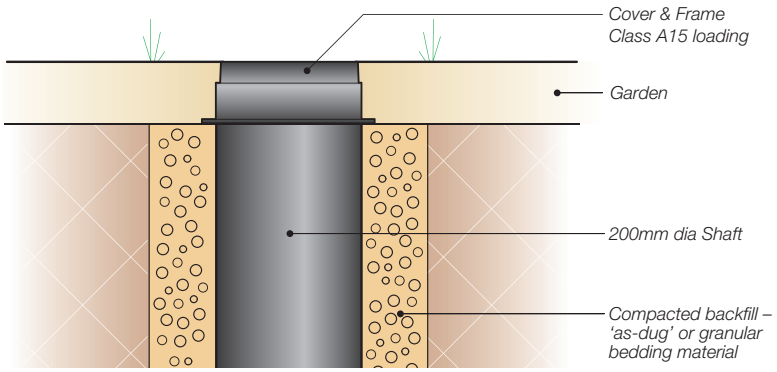
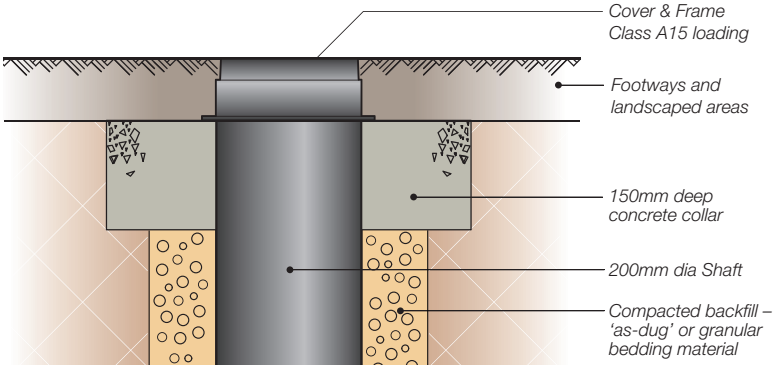


Figure 13: Installation detail A15 – For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes)



For both non-load and infrequent loading applications, as above

- Prepare polypropylene Cover and Frame [20NE015] for installation onto shaft
- Position the cover and frame spigot into the shaft section
- Fix frame to shaft using self-tapping screws

B125 & D400 Cover and Frame

Ductile iron cover and frames

Ductile iron options are recommended for heavier loaded applications:

Class B125 – with medium duty loading capacity of 125kN (12.5 tonnes) where the frame is supported by a concrete plinth. Suitable for applications such as car parks and service roads.

Class D400 classification – with loading capability of up to 400kN (40 tonnes) where supported by a concrete plinth. Suitable for carriageways and roads subject to motor vehicle trafficking.

Installation procedures:

For B125 applications (See Figure 14)

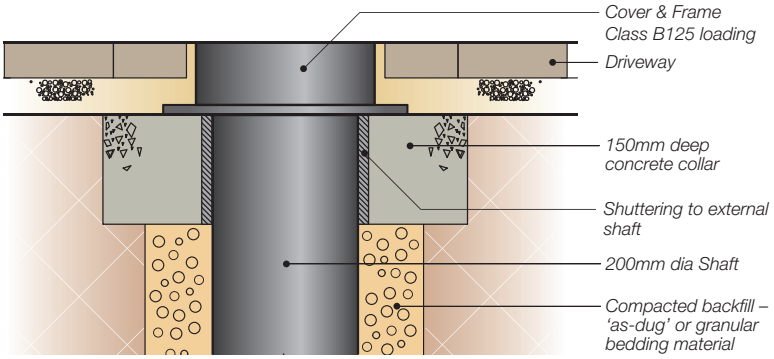
EXAMPLE: car parks and service roads

- Trim shaft section at last stage of construction. Ensure unit is at correct height
- Protect shaft from traffic loading by shuttering the outside of the shaft (See Figure 14)
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber with minimum opening 450mm x 450mm – or 450mm 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 14)

Trafficked application (e.g. roadway)

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

Figure 14: Installation detail for B125 loading: paved areas with limited traffic load



Wavin Range 315 IC

Range 315 Chamber and Shaft

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

The Range 315 inspection chamber may be installed in the same minimum trench width as required for standard 110mm or 160mm drainage pipework. NO extension of trench width is required.

All elements are lightweight: may be handled/installed by a single person.

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

NOTE: On 34NE300/36NE300 Straight Bases, a flow indication arrow is inscribed

- 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

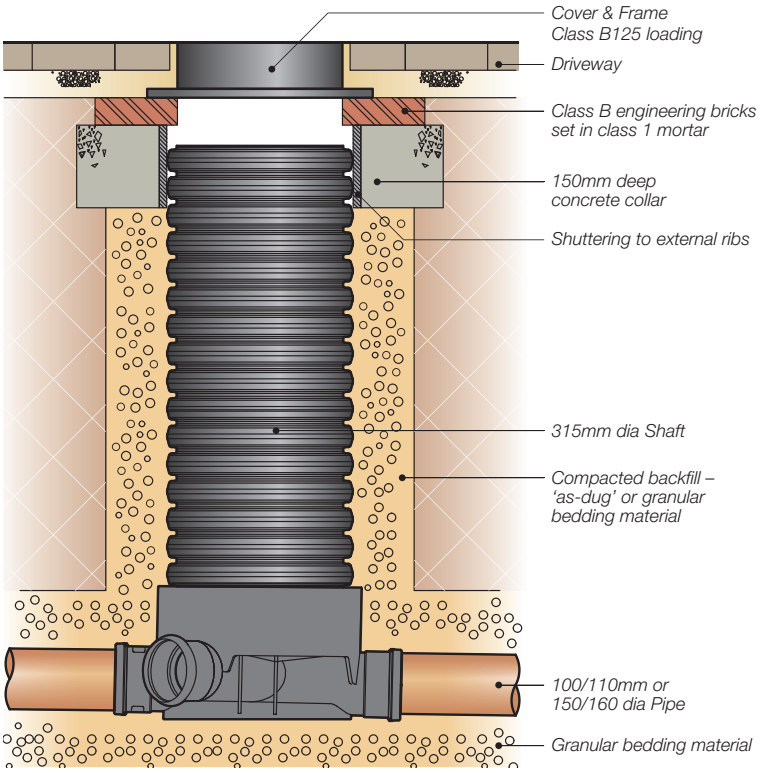
- Cut corrugated shaft to approx. Invert depth of Chamber. RECOMMENDATION: leave extra 300mm depth to allow for possible final site changes
- Locate sealing ring between 2nd and 3rd ribs from shaft bottom. Ensure ring is seated correctly/not twisted
- Clean inside of Base socket and lubricate this entire 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 with cap provided

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

Figure 15: Typical installation detail: Range 315 Inspection Chamber. Type 4



A15 Cover and Frame

A15 polypropylene cover and frames

30NE015 uses a dual fixing system for additional safety. The cover is pre-fixed to the frame using screws.

RECOMMENDATION: use self-tapping screws [not supplied] to secure the frame to the shaft.

For installation in areas not subject to loading, such as domestic gardens, no concrete plinth support is required . (See Figure 16).

For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes). For A15 applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes) not including domestic driveways, the frame should be supported by a concrete plinth (See Figure 17).

Installation procedures:

For green areas and pedestrian areas NOT* subject to vehicle loading (See Figure 16)

EXAMPLE: domestic gardens

- Trim shaft section at last stage of construction. Ensure unit is at correct height

***For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes) (See Figure 17)**

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

Figure 16: Installation detail – green areas (non-loaded)

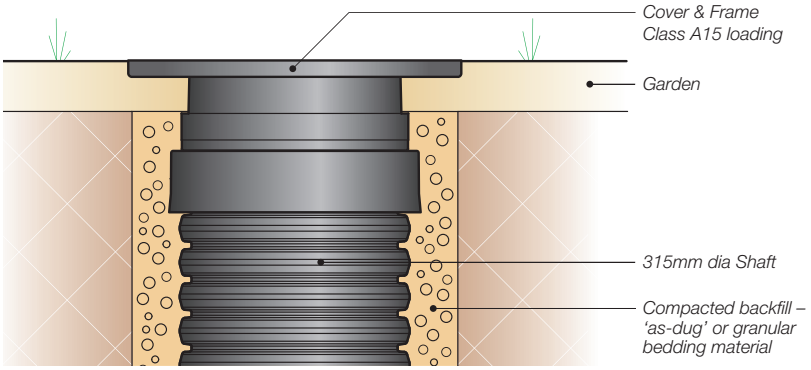
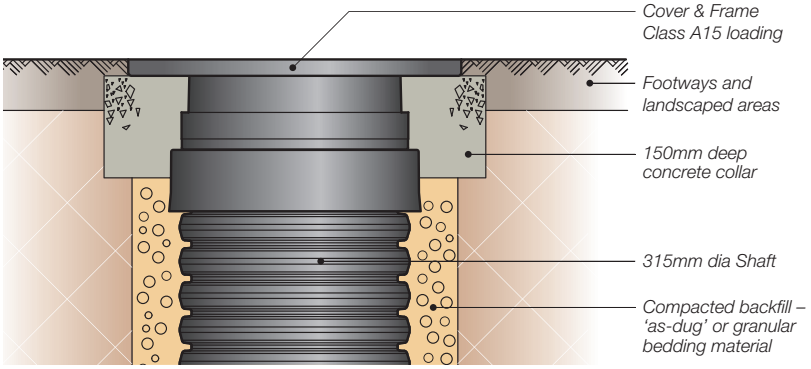


Figure 17: Installation detail A15 – For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes)



For all A15 applications

- Clean outside of shaft section between first and second rib
- Locate sealing ring ensuring it is seated correctly/not twisted
- Prepare polypropylene A15 Cover and Frame [30NE015] for installation onto shaft:
  - clean inside of frame socket area
  - apply lubricant to entire surface area
- Position the cover and frame socket over the shaft section and push home
- Screw frame to shaft using self-tapping screws [not provided]

Wavin Range 315 IC

B125 & D400 Cover and Frame

Ductile iron cover and frames

Ductile iron options are recommended for heavier loaded applications:

Class B125 – with medium duty loading capacity of 125kN (12.5 tonnes) where the frame is supported by a concrete plinth. Suitable for applications such as car parks and service roads.

Class D400 classification – with loading capability of up to 400kN (40 tonnes) where supported by a concrete plinth. Suitable for carriageways and roads subject to motor vehicle trafficking.

Installation procedures:

For B125 applications (See Figure 18)

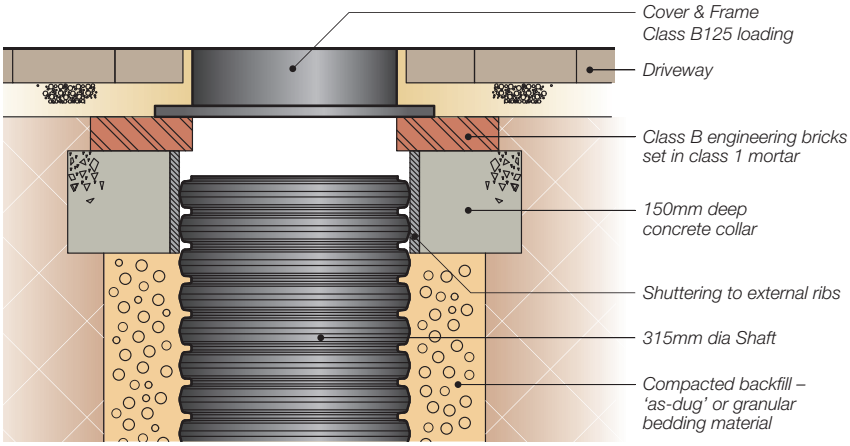
EXAMPLE: car parks and service roads

- 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 18)
- Lay 150mm thick slab of pre-cast or in situ concrete around top of shaft chamber with minimum opening 450mm x 450mm – or 450mm 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 18)

Trafficked application (e.g. roadway)

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

Figure 18: Installation detail for B125 loading: paved areas with limited traffic load



Wavin Range 450 IC

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. The heaviest discharge MUST be on the main through channel also.

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

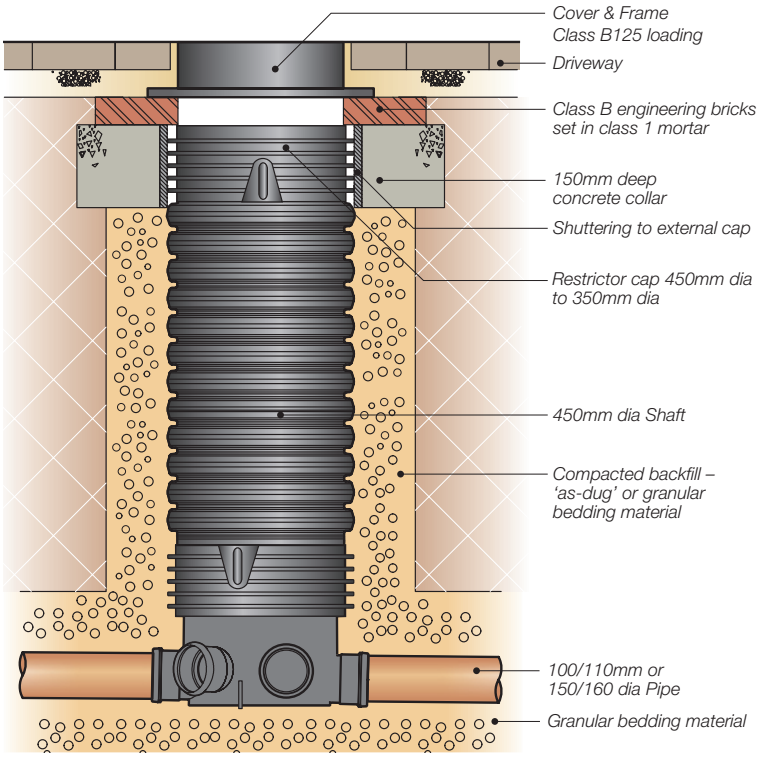
Trim shaft/fit restriction access cap

- Trim shaft to required height using finetoothed 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



Wavin Range 450 IC

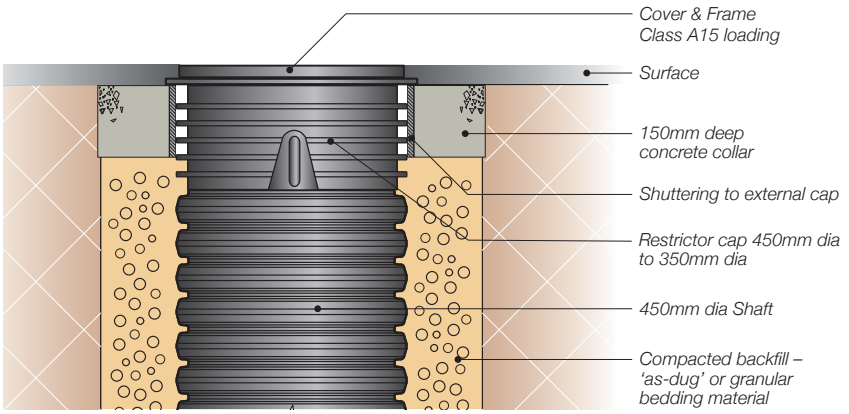
Installation procedures:

For non-trafficked pedestrian applications subject to 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

Figure 20: Installation detail A15 – For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes)



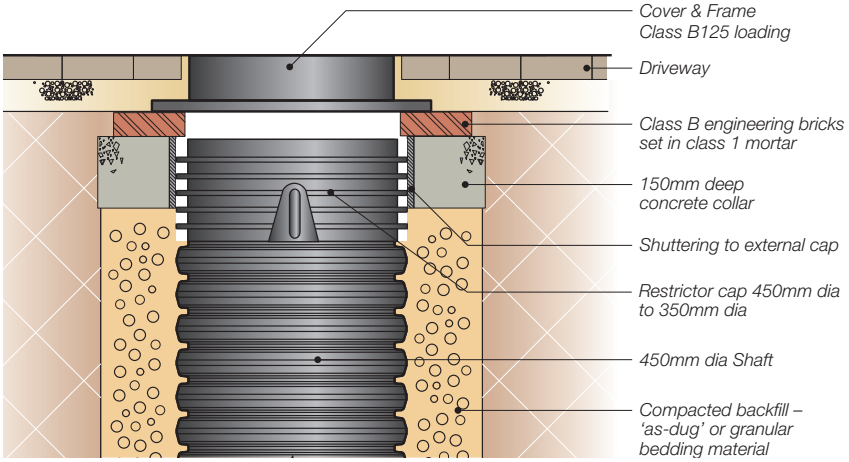
B125 & D400 Cover and Frame

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)

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



Trafficked application (e.g. roadway)

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

Wavin Range 600 IC

Range 600 Chamber and Shaft

NOTE: The following is a summary of installation procedures following selection of a suitable Range 600 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
- Ensure all inlets/outlet are free from dirt or grit
- Use standard jointing sequence to connect 150mm, 225mm or 300mm UltraRib pipes to inlets/outlet

For connection of TwinWall pipes in these sizes, use Adaptors 6TW145, 9TW145 or 12TW145.

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

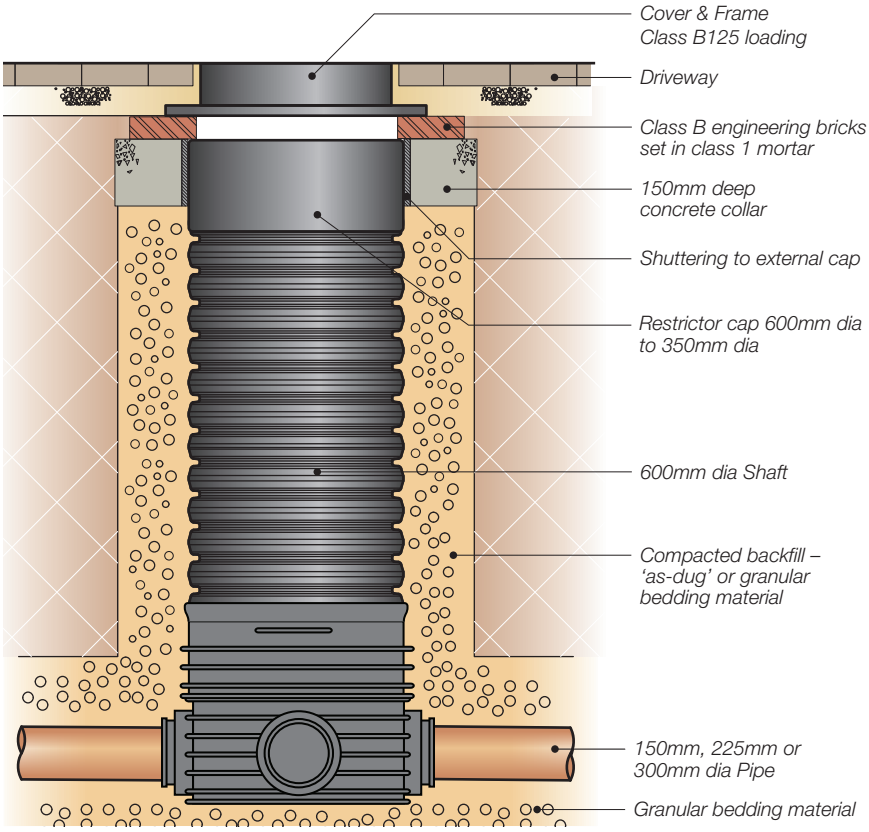
Trim shaft/fit restriction access cap

- Trim shaft to required height using finetoothed 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 600 to 350mm restrictor cap, position over top of shaft, and push fully home

Figure 22: Typical installation detail: Range 600 Inspection Chamber. Type 3



Installation

Wavin Range 600 IC

Installation procedures:

For non-trafficked pedestrian applications subject to loading up to 15KN (1.5 tonnes) (See Figure 23)

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 24)
- 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 24)

Trafficked application (e.g. roadway)

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

Figure 23: Installation detail A15 – For non-driveway applications subject to infrequent vehicle loading up to 15kN (1.5 tonnes)

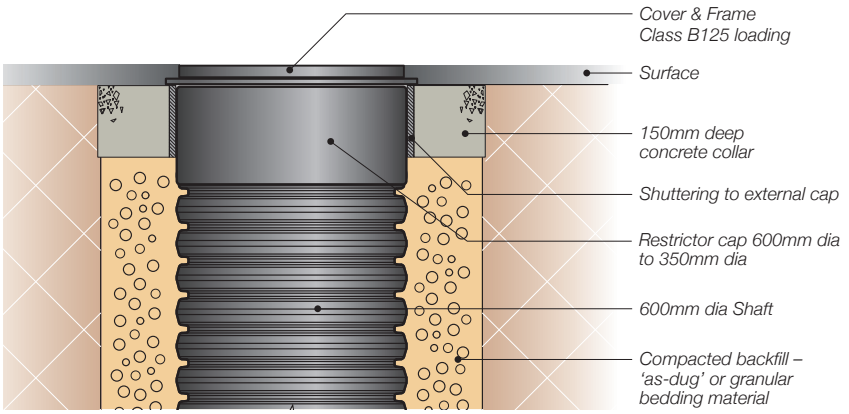
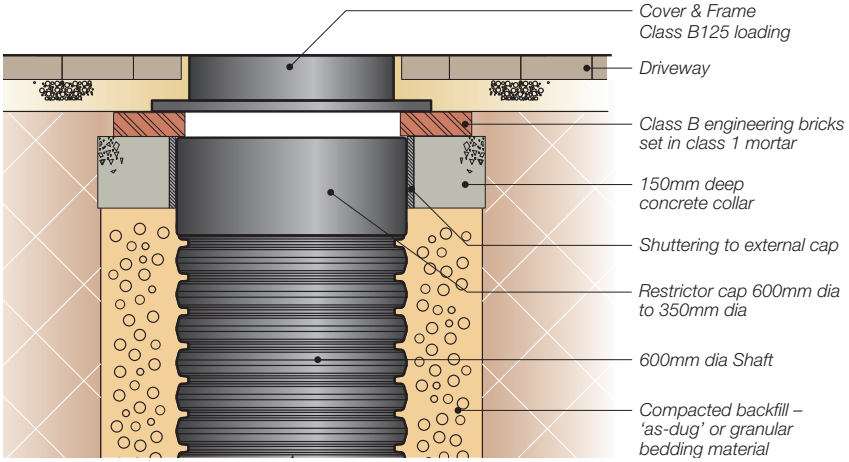


Figure 24: Installation detail for B125 loading: paved areas with limited traffic load



Typical Backdrop Connection

Backdrop Connections for Ranges 315, 450 and 600 IC

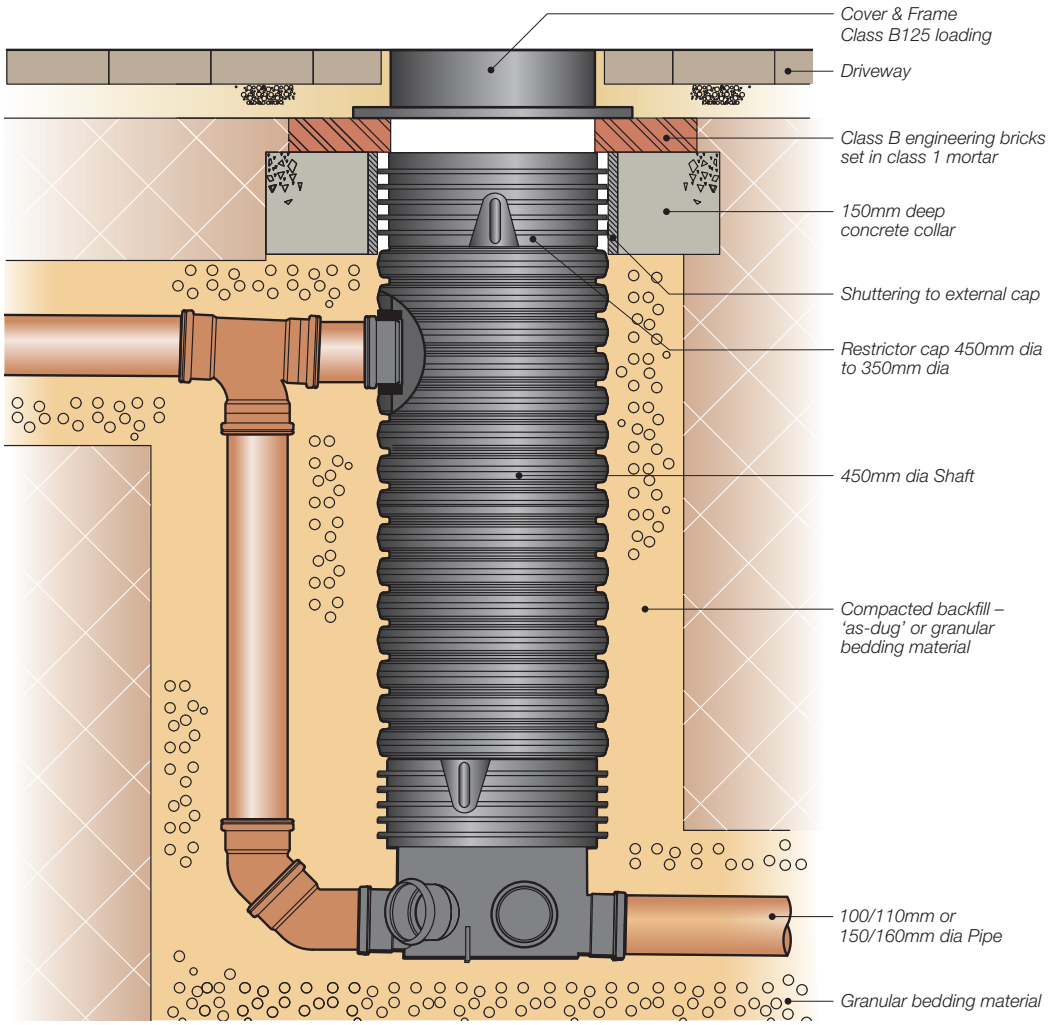
Installation of backdrop connections

A chamber which has substantially different invert levels will require backdrop connection of one or more drains. This operation can be done externally on site (See Figure 25).

Use a combination of Backdrop Kit [NE950 or NE960], with associated 100/110mm or 150/160mm fittings, for in situ connection to a shaft, as follows:

- Drill required opening into corrugated shaft section at appropriate place
- Clean and remove any swarf from the opening
- Install the special 110mm or 160mm seal into the opening
- Fully lubricate around the entire internal surface of the seal
- Insert specially designed “in-situ” socket connector into the seal opening
- Lubricate the outside surface of the spigot pipe to be connected and insert into the socket connector
- Make remaining connections in the same way as for standard jointing of 110mm or 160mm pipes and or fittings

Figure 25: Typical installation detail – typical backdrop situation



Wavin Osma Chambers

Testing

All testing of these non-man entry chambers and connecting pipework must be undertaken at ground level.

For guidance, please use the following:

Air Testing using remote test bags: equipment required

- 3 x 1 metre x 8mm Steel Drainage Rods
- 50mm Double Worm Screw for use with Steel Drainage Rods
- PVC sealing bags fitted with Schrader Valve and 6 metre hose
- Steel drain plug with testing point
- Bicycle Pump
- Tyre pressure gauge to ensure correct inflation pressure of the test bags

Air Testing procedure

1. Assemble drain rods to 3 metres in length with double worm attachment on end.
2. Remove as much air as possible from the PVC Sealing Bag.

Method: hold valve open and squeeze bag flat.

Tip: folding the bag in half to make it as small as possible will make it easier to locate.

3. Twist neck of PVC Sealing Bag into double worm attachment until it has firm grip on bag.
4. Ensure valve end of hose is secure with no danger of falling down the chamber.
5. Hold drain rods and hose from the PVC Sealing Bag together. Start to lower the test bag into the base.

Tip: Keep hose tight while lowering bag. This helps to keep bag in place.

6. When bag is in chamber base, position it into the channel of the run to be tested.
7. By using the channel as a guide, slide test bag into the mouth of the pipe, and as far as possible into the pipe.

Method: use rods to push bag into position.

8. Leave rods attached (this ensures bag is held in position). Start to pump the bag up using a bicycle pump.

NOTE: When inflating the test bags, follow manufacturer's instructions to ensure pressure is not exceeded. Use tyre pressure valve to monitor bag pressure.

9. If required, remove rods by twisting them in an anti-clockwise direction to release the double worm. Check the valve end of hose is safely positioned.
10. Place a similar sealing bag or a steel drain plug at the other end of the pipe length to be tested. (This could be another chamber or a terminal access point.) Both bag and steel drain plug must include a suitable testing point.
11. Attach a manometer. Carry out required air test method.
12. Remove sealing bag.

Method: twist double worm attachment around the hose at ground level. Lower it down the hose, guiding the rods to the bottom of the chamber and once again grip the bag.

NOTE: No requirement to grip bag tightly. This is simply to aid its removal. Release as much air as possible from bag. Then slide bag back out the pipe with the rods. When this is done, lift/remove all test equipment out of the chamber.

Maintenance

As with all Wavin Osma Chambers, the smooth interior bore of chamber channels and associated pipe systems will aid the flow of water and waste through the system.

Because man-entry of Wavin Osma chambers is not possible, maintenance work such as Rodding, Jetting and CCTV inspection must be undertaken at ground level.

Always follow the Health & Safety and Operational procedures of equipment suppliers.

Notes

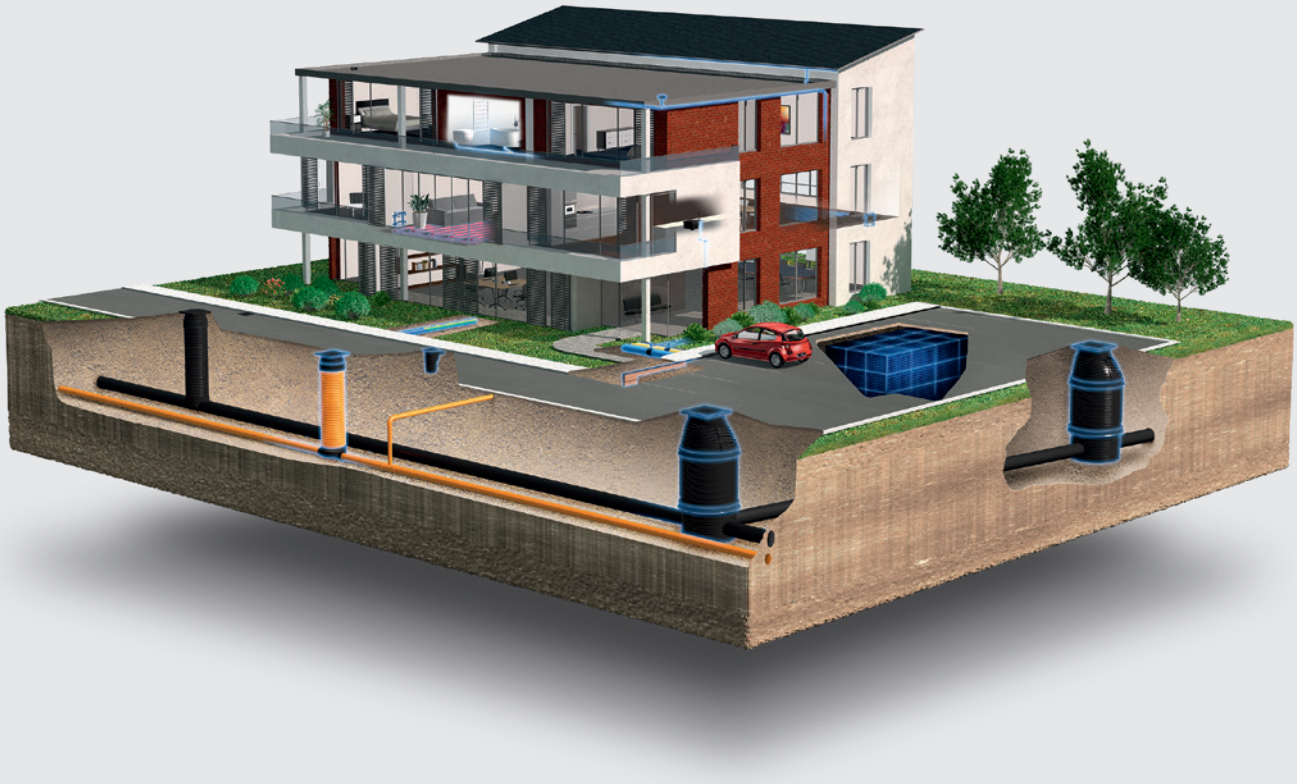
Wavin Osma Chambers

Notes

Wavin Osma Chambers

Discover our broad portfolio at www.wavin.co.uk

Hot & Cold Water
Foul Water
Gas & Water Mains
Indoor Climate
Storm Water
Geotextiles
Soil & Waste



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Advancing life together

Wavin is part of Orbia, a community of companies working together to tackle some of the world's most complex challenges. We are bound by a common purpose: To Advance Life Around the World.

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