Hunter offers a comprehensive range of high quality sewer and drainage systems to overcome the most complicated drainage layout. Like all our products, they are economical, strong and resistant to impact, and are easy to install. There is a range of drainage accessories designed to meet the needs of the most stringent building regulations. Their overall flexibility ensures that Hunter can supply all domestic and commercial requirements for foul water and surface water drainage, up to and including the main sewers.
Underground Drainage

Hunter Underground Systems have been designed to ensure you can install and test with confidence. Reliability is inbuilt in all our products offering you peace of mind.

Our products are designed to be:

- Durable and impact resistant
- Light in weight, easy to handle and quick to install
- Smooth bore pipe with longer intervals between joints reduces the risk of blockage and improves flow
- A full range of underground drainage, sewer and associated drainage products
- Easy to install, even in wet conditions
- A comprehensive range of components is available in 110mm, 160mm, 200mm, 250mm and 315mm sizes.

Standards

Hunter Plastics Underground Drainage Systems comply with the requirements of the following European/British standards:

- **BS4660:2000** Unplasticised PVC underground drain pipes and fittings 110mm & 160mm.
- **BS EN1404-1.1998** Unplasticised PVC pipes and fittings for gravity sewers 200mm to 315mm.
- **BS EN752.1996** Drainage and sewer systems outside buildings.
A  Raising Piece  DS72  p29
B  Sealed Back Inlet Plate  DS10  p21
C  Raising Piece  DS48  p20
D  Back Inlet Hopper  DS7  p20
E  Bend  DS331  p11
F  Bend  DS671  p16
G  Cover & Frame  DS62  p28
H  Raising Piece  DS58  p28
I  Chamber Base  DS50  p28
J  Bend  DS671  p16
Underground Drainage
Adjustable Fittings

110mm Twist Lock Bend (DS329)

- Adjusts from 5° - 30°
- ‘Twist and Lock’ into position
- Push fit socket connection
- Ideal for connecting to chambers

110mm Multiflex Bend & Branch (MFBDO & MFYTO)

- Manufactured to EN1401
- Bend adjusts: From 0 - 90° and is available in single and double socket.
- Branch adjusts: From 90° - 45° and is available in double and triple socket

Tips & Hints

Like Multiflex Bends and Branches? - Also available in Soil and waste fittings, check out our Plumbing Brochure for more info
Underground Drainage
Access Fittings

110mm Rodding Point
(DS670)

- Angled to 45° for fast efficient installation
- Secure four rust proof stainless steel screw fixing
- Mechanically sealed with internal ‘o’ ring suitable for some internal installations.

110mm Access Junction
45° (DS680 & DS681)

- Single Equal
- Double socketed with a spigot tail for quick installation
- Available in both left and right handed versions.
## Underground Drainage
### Pipe & Fittings

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>110mm</td>
<td>160mm</td>
</tr>
</tbody>
</table>

#### Pipe - Plain Ended

<table>
<thead>
<tr>
<th>Length</th>
<th>Code 1</th>
<th>Code 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3m</td>
<td>DS505</td>
<td>DS534</td>
</tr>
<tr>
<td>6m</td>
<td>DS544</td>
<td>DS545</td>
</tr>
</tbody>
</table>

#### Pipe - Socketed

<table>
<thead>
<tr>
<th>Length</th>
<th>Code 1</th>
<th>Code 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3m</td>
<td>DS508</td>
<td>DS548</td>
</tr>
<tr>
<td>6m</td>
<td>DS549</td>
<td>DS550</td>
</tr>
</tbody>
</table>

#### Pipe - Land Drainage Socketed

<table>
<thead>
<tr>
<th>Length</th>
<th>Code 1</th>
<th>Code 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>6m</td>
<td>DS546</td>
<td>DS547</td>
</tr>
</tbody>
</table>

#### Socket

<table>
<thead>
<tr>
<th>Type</th>
<th>Code 1</th>
<th>Code 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>DS208</td>
<td>DS406</td>
</tr>
<tr>
<td>Double</td>
<td>DS211</td>
<td>DS409</td>
</tr>
<tr>
<td>Slip Coupling (No internal stop)</td>
<td>DS212</td>
<td>DS410</td>
</tr>
</tbody>
</table>

#### Junction - Single Equal

<table>
<thead>
<tr>
<th>Type</th>
<th>Code 1</th>
<th>Code 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>87½° Spigot Tail</td>
<td>DS269</td>
<td>DS427</td>
</tr>
<tr>
<td>45° Spigot Tail</td>
<td>DS278</td>
<td>DS430</td>
</tr>
<tr>
<td>(DS278 with 2 x 110mm upstands)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>87½° Expansion Tail</td>
<td>DS672</td>
<td></td>
</tr>
<tr>
<td>45° Expansion Tail</td>
<td>DS678</td>
<td>DS428</td>
</tr>
</tbody>
</table>

#### Single Unequal

<table>
<thead>
<tr>
<th>Type</th>
<th>Code 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>45° Spigot Tail 160mm x 110mm</td>
<td>DS471</td>
</tr>
</tbody>
</table>
**Underground Drainage Fittings**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>110mm</td>
<td>160mm</td>
</tr>
</tbody>
</table>

- **Access Fitting - Access Cap**
  - Spigot Tail: DS246, DS421

- **Socket Plug**
  - Also for on-site socket protection: DS214, DS411

- **Access Bend**
  - $87\frac{1}{2}^\circ$: DS326

- **Rodding Point**
  - Expansion Tail: DS670

- **Access Pipe**
  - Spigot Tail: DS309

- **Access Junction**
  - Single Equal Spigot Tail LH $45^\circ$: DS680
  - Single Equal Spigot Tail RH $45^\circ$: DS681

- **Bend Spigot Tail**
  - $87\frac{1}{2}^\circ$ Spigot Tail: DS322, DS403
  - $45^\circ$ Spigot Tail: DS331, DS404
  - $30^\circ$ Spigot Tail: DS318, DS418
  - $15^\circ$ Spigot Tail: DS408
  - $20^\circ$ Spigot Tail: DS696
  - $10^\circ$ Spigot Tail: DS697
Underground Drainage

Non Return Valves

Simple and effective device for reducing the risk of flood damage caused by surface water flowback through the underground drainage system.

Install within an access point between the facility to be protected and the main sewer, any flowback will automatically shut the valve.

In pumped drainage systems, for example, where effluent water is being pumped from a basement, the non return valve will help protect the system in the event of a power failure.

Integral closing handle allows valve to be shut manually for easy system maintenance or cleaning.

Meets with the requirements of the building regulations approved document H1.

Tips & Hints

Remember: Rodent control should be taken into account when redeveloping sites. This can be in the form of sealed inspection and intercepting traps such as the Hunter Non Return Valves, available in 110mm, 160mm and 200mm.
Connecting to Other Materials

Installation Procedures

Hunter offer a choice of adapters which connect to existing materials, we have yet to find a connection our range can’t make!

Connection to Clay Socket

Place adaptor DS349 or DS438 in the cast iron or clayware socket caulked with gaskin yarn, and apply cement mortar in the conventional manner.

Connection to Cast Iron Socket

When using the adaptor with a cast iron socket, molten lead or lead wool can be used instead of the cement mortar.
Connection to Thick or Thin Wall Clay Spigot

Connection to Thick Clay Spigot

Simple joints can be achieved by installing a DS27 adaptor - push on to clean smooth pipe ends and tighten bands with a screwdriver
Underground Drainage
Bends and Couplings

<table>
<thead>
<tr>
<th>Product Code</th>
<th>110mm</th>
<th>160mm</th>
</tr>
</thead>
</table>

**Adjustable Bend**
Spigot Tail 5° - 30°
DS329

**“Multiflex”**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>110mm</th>
<th>160mm</th>
</tr>
</thead>
</table>

Double Socket
MFBDO

Spigot Tail
MFBSO

Treble Socket
MFYTO

Double Socket
MFYDO

**Bend**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>110mm</th>
<th>160mm</th>
</tr>
</thead>
</table>

87\(\frac{1}{2}\)° Expansion Tail
DS671

45° Expansion Tail
DS676

30° Expansion Tail
DS675

20° Expansion Tail
DS674

10° Expansion Tail
DS673

**Long Radius**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>110mm</th>
<th>160mm</th>
</tr>
</thead>
</table>

456mm Radius 87\(\frac{1}{2}\)°
DS555

456mm Radius 45°
DS557

686mm Radius 87\(\frac{1}{2}\)°
DS556

686mm Radius 45°
DS558

600mm Radius 20°
DS662

600mm Radius 10°
DS661
## Underground Drainage

### Bends and Couplings

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>110mm</td>
<td>160mm</td>
</tr>
</tbody>
</table>

#### Rest Bend

| 87\(\frac{1}{2}\)^\circ Expansion Tail | DS663 |

#### Reducer Level Invert

| 110mm x 82mm | DS633 |
| 160mm x 110mm | DS433 |

#### Non Return Valve

| Spigot Tail | DS342 | DS442 |

#### Drain Connector

- Soil to Drain (Finned Tail)  | S121 |
- PVCu to Cast Iron BS437 Socket | DS349 | DS438 |
- PVCu to Thickwall Clay Pipe | DS350 |
- PVCu Thinwall Clayware Spigot | DS351 |
- Inspection Chamber to Thickwall Clay Pipe | DS347 |
- Inspection Chamber to Thinwall Clay Pipe | DS348 |
- Multi Rainwater Adaptor (Flexible) (Fits 110mm Pipe or Socket, external use only) | DS24 |
- Adaptor (Flexible) to 32mm/40mm Waste | DS25 |

#### “Eazisleeve” Complete With Stainless Steel Clips

| Drain Adaptor Coupling | DS26 | DS27 |
| PVC-PVC Adaptor      | DS28 |
Underground Drainage

Bottle Gullies

A wide range of applications to suit most building situations. Hunter bottle gullies can be used to remove surface water from paved pedestrian areas. Side and back boss inlets accept waste water from ground floor domestic appliances and/or rainwater from roofs.

- Ideal for domestic, industrial and commercial installation
- 3 closed bosses accept waste or rainwater pipework from 32mm up to 110mm sizes
- Includes rodding access.

The square top version is sized at 200mm with spacer nibs at the edges to complement block paving and is designed to make finishing neat and simple when installed in slab or block paved areas. The offset top is designed to fit snugly against a wall, reducing the need for time-consuming or untidy finishing.

Tips & Hints

By adding a raising piece the gully grating can be installed where paving is set at varying heights, where a new surface is laid or if deep bedding is required. It can be cut to the desired length to allow the gully to be installed at depths of up to 600mm, reducing the need for additional bends. REMEMBER: always drill out Boss connections as “knocking out” can damage the fitting.
## Underground Drainage

### Fittings

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>110mm</td>
<td>160mm</td>
</tr>
</tbody>
</table>

### Multi Gully Trap
(Use with Standard Hunter Bends to form P, S or Q trap)  
**DS12**

### Gully Trap
Expansion Sockets 90° ‘P’ Trap  
**DS1**

### Bottle Gully (includes Grid and Rodding Access)

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circular Top</td>
<td>DS46</td>
</tr>
<tr>
<td>Square Top</td>
<td>DS49</td>
</tr>
<tr>
<td>Circular Top Open Back Inlet</td>
<td>DS43</td>
</tr>
<tr>
<td>Square Top Accessory (use with DS46) 200mm x 200mm</td>
<td>DS54</td>
</tr>
<tr>
<td>Circular Grid-Spare (Use with DS46, DS49 or DS54)</td>
<td>DS55</td>
</tr>
<tr>
<td>Raising Piece (Use with DS46, DS49 or DS54)</td>
<td>DS48</td>
</tr>
<tr>
<td>150mm x 150mm Sealed Access (Also fits 110mm and 160mm pipes)</td>
<td>DS47</td>
</tr>
</tbody>
</table>

### Square Hopper

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Socket Tail</td>
<td>DS3</td>
</tr>
<tr>
<td>230mm Spigot Tail</td>
<td>DS2</td>
</tr>
<tr>
<td>Spigot Tail complete with Grating</td>
<td>DS4</td>
</tr>
</tbody>
</table>

### Back Inlet Hopper

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solvent Socket Tail</td>
<td>DS7</td>
</tr>
<tr>
<td>230mm Spigot Tail</td>
<td>DS6</td>
</tr>
</tbody>
</table>
## Underground Drainage Fittings

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS8</td>
<td></td>
<td>Back Inlet Hopper - Spigot Tail complete with Grating and Back Inlet Plate</td>
</tr>
<tr>
<td>DS20</td>
<td></td>
<td>150mm x 150mm Grating</td>
</tr>
<tr>
<td>DS11</td>
<td></td>
<td>150mm x 100mm Back Inlet Plate</td>
</tr>
<tr>
<td>DS22</td>
<td></td>
<td>150mm x 150mm Sealed Cover Plate</td>
</tr>
<tr>
<td>DS10</td>
<td></td>
<td>150mm x 250mm Sealed Back Inlet Plate</td>
</tr>
<tr>
<td>DS500</td>
<td></td>
<td>Drain Leaf Guard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accepts Rainwater Pipes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to 110mm diameter. To cover drains up to 300mm wide x 265mm</td>
</tr>
<tr>
<td>DS559</td>
<td>DS560</td>
<td>Channel Pipe - Plain Ended</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Flanges supplied loose)</td>
</tr>
<tr>
<td>DS561</td>
<td></td>
<td>Channel Bend</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45° Left Hand</td>
</tr>
<tr>
<td>DS563</td>
<td></td>
<td>45° Right Hand</td>
</tr>
<tr>
<td>DS567</td>
<td></td>
<td>87½° Left Hand</td>
</tr>
<tr>
<td>DS568</td>
<td></td>
<td>87½° Right Hand</td>
</tr>
<tr>
<td>DS566</td>
<td></td>
<td>Long Radius - Plain Ended</td>
</tr>
<tr>
<td></td>
<td></td>
<td>87½° 455mm Radius</td>
</tr>
</tbody>
</table>
Underground Drainage

Tips & Hints

Remember: When planning the drainage layout for new developments, private (i.e. drains that serve more than one property) and public sewers must be positioned so as to make reasonable allowance for the possibility of future extensions without needing to build over the sewer.
Underground Drainage
Chambers

Inspection and Shallow Access Chamber

Hunter inspection chambers are available in 110mm and 160mm sizes and are designed to offer an easier, more economical alternative to traditionally constructed manholes.

- They are reliable, quick and easy to install with ring seal sockets and a dry joint base to riser assembly.
- Injection moulded in strong polypropylene material with added diameter strengthening ribs offering high resistance against impact damage.
- Designed with Half Channel Invert offering ‘improved flow, Conforms to all current building regulations and BS8301.
- With finger friendly removable plugs. Plugs can be pushed out or re-sited as required. Integral support feet makes level bedding simple.
- Manufactured in environmentally-friendly recycled polypropylene.

Tips & Hints

Note: Manholes and sewers are exceptionally dangerous places. It is most strongly recommended that all work on live sewers is undertaken by drainage specialists who have successfully completed a ‘Confined Spaces’ and/or ‘Sewer Working’ safety course. Properly trained and accredited tradesmen will have certificates to prove their competence. DO NOT TAKE RISKS.
Chamber Raising Piece

The chamber raising piece is designed for simple dry-jointing to provide instant watertight joints, and have strengthening ribs and webbing.

Raising pieces can be simply built up to the required overall height between chamberbase and cover.
450mm Equal Chamberbase

Manufactured in tough polypropylene material, they are impact resistant and are simple and straightforward to install.

The 450mm chamberbase unit is comprised of four swept inlets at 90° and 45° with a 110mm in/outlet and a built-in fall for efficient flow performance.

450mm Unequal Chamberbase

The 450mm chamberbase unit is comprised of four swept inlets at 90° and 45° with a 160mm in/outlet: 2 x 160mm inlets and 2 x 110mm inlets.
## Chambers

**Inspection Chambers**

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>110mm</td>
<td>160mm</td>
</tr>
</tbody>
</table>

### 450mm Equal Chamberbase 263mm Invert

- 3 Sockets Supplied with Blanking Plugs
- DS50

### 110mm Blanking Plug

- Spare
- DS56

### 450mm Unequal Chamberbase 360mm Invert

- Side Sockets Supplied with Blanking Plugs
- DS66

### 580mm x 580mm Square to Round Access Cover

- 5 Tonnes wheel load suits pedestrian areas/domestic driveways. (Accepts Paviors)
- DS65 DS65

### Cover and Frame Durable Polypropylene

- Durable Polypropylene 3.5 Tonnes wheel load suits pedestrian areas/domestic driveways
- DS62

### Square Cover and Frame

- Durable Polypropylene 3.5 Tonnes wheel load suits pedestrian areas/domestic driveways
- DS76

### Raising Piece

- 164mm effective height (For DS50 or DS66)
- DS58 DS58

### Chamberbase Seal

- (For DS66 Base to first Riser only)
- DS67
Chambers
Shallow Access

230mm Equal Chamberbase 140mm Invert
Side Sockets Supplied with Blanking Plugs  DS71

Raising Piece
(205mm effective height 2 risers form 600mm overall height)  DS72

Cover and Frame
Aluminium  DS39

‘O’ Ring to form Sealed Access
(for DS39 only)  DS40

PVCu - Round
(Sealed Unit)  DS69

PVCu - Square  DS68

Shallow Access Cover
390mm x 390mm Square to Round
3.5 Tonnes wheel load suits pedestrian areas/domestic driveways. (Accepts Paviors)  DS75
Underground Drainage
Covers and Frames
For pedestrian areas only

Round Aluminium Cover and Frame (DS39)
- Captive two screw locking system
- Can be sealed using DS40
- For pedestrian areas only

PVC-u Cover and Frame (DS68)
- Captive single screw locking system
- For pedestrian areas only

Square to Round Shallow Access Cover (DS75)
- 390mm x 390mm cover and frame for a variety of landscaping materials
- 3.5 Tonne wheel load
- Two integral lifting levers, including stoppers to prevent dirt build-up
Underground Drainage
Covers and Frames

For pedestrian areas only

Round Cover and Frame
(DS62)

- Lightweight chamber cover and frame made from toughened polypropylene for easy manual handling
- 3.5 Tonne wheel load
- Captive screw locking system
- Can be fixed to riser system for complete security

Square Recessed Cover and Frame (DS65)

- Cover and frame for a variety of materials
- 5 Tonne wheel load
- 580mm x 580mm square sized for use with block paving and other driveway materials
- Two integral lifting levers, including stoppers to prevent dirt build-up

Approved by major housebuilders

Tips & Hints

“Lightweight access covers should be secured to deter unauthorised access” - Building Regulations Part H
Chambers

Assembly Height Guide

Hunter 450mm Inspection Chambers can be installed up to 1.2m deep. Risers can be cut as required to achieve the final ground level.

<table>
<thead>
<tr>
<th></th>
<th>DS50</th>
<th>DS66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base only</td>
<td>280mm</td>
<td>360mm</td>
</tr>
<tr>
<td>Base with 1 riser</td>
<td>444mm</td>
<td>524mm</td>
</tr>
<tr>
<td>Base with 2 risers</td>
<td>608mm</td>
<td>688mm</td>
</tr>
<tr>
<td>Base with 3 risers</td>
<td>772mm</td>
<td>852mm</td>
</tr>
<tr>
<td>Base with 4 risers</td>
<td>936mm</td>
<td>1016mm</td>
</tr>
<tr>
<td>Base with 5 risers</td>
<td>1100mm</td>
<td>1180mm</td>
</tr>
</tbody>
</table>
Surface Drainage

Channel Drainage

Hunter surface drainage efficiently removes water from pedestrian areas and domestic driveways.

The unobtrusive design blends perfectly with surrounding materials and is ideal for garage fronts, private driveways and patios.

- Corrosion resistant
- Supplied in packs for ease of storage and handling
- Durable design resists up to 1 tonne wheel load

Tips & Hints

Surface Drainage and Gullies may be connected to the underground drainage system, simply connect via a suitable gully trap.
Surface Drainage
Point Drain Chambers

Courtyard Gully
250mm x 250mm  DCR300

Designed as an inexpensive efficient point drainage to complement our Channel Drainage. Ideal for domestic and commercial garages, wash down paved pedestrian thoroughfares, patios and much more.

Capable of withstanding loads of up to one Tonne (Under 30 mph).

Integral silt trap design prevents accidental loss of components, such as nuts and bolts etc.

Typical Installation

[Diagram of typical installation with labels: Concrete support, Sand blinding, Slab finish, Granular fill (as-dug) material, DS12 gully, 87 1/2° bend to form 'Q' trap, 45° bend to form 'P' trap]
Surface Drainage
Channel System

Driveway Pack Channel Drain including Grating
Per 1m length
1 tonne wheel load (Sold as pack of 3m only)

End Cap/outlet
Fits LH or RH

Debris Trap
For bottom outlet

Channel and grille system designed to remove surface water from domestic areas, e.g. driveways, patios etc.
Anti corrosive PVC-u non-slip grille. Grilles have excellent chemical and U/V resistance.
No solvent cements required. Polypropylene channel contains integral silt trap.

Typical Installation
Surface Drainage
Hunter Surface Drainage solutions come with a reversible side or bottom outlet with simple ‘knock out’ section.
Hunter’s sewer drainage range of products are light in weight and easy to install.

The high performance integral sealing system ensures that joints remain leak free for years to come.

Available in 160mm, 200mm, 250mm & 315mm.

Manufactured to BS EN 1401-1: 1998

**Tips & Hints**

Drains connecting into existing pipework (other than at a manhole) should be prefabricated units to avoid the use of “saddles”. Where the use of a saddle is unavoidable, the hole in the existing pipe must be drilled - not broken out.
Underground Drainage

Sewers

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Product Code</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>200mm</td>
<td>250mm</td>
<td>315mm</td>
</tr>
</tbody>
</table>

Pipe – Plain Ended

Plain Ended - 6m  DS744  DS771
Socketed - 6m     DS752

Single Socket

DS729

Double Socket

DS730  DS753  DS773

Bend

87°1/2' Spigot Tail  DS731  DS754  DS774
45°                  DS732  DS755  DS775
30°                  DS733  DS756
15°                  DS728  DS757  DS777

Junction - Single Equal

45° Spigot Tail     DS734  DS758

Single Unequal 45°

110mm Spigot Tail  DS779
160mm Spigot Tail  DS735  DS760
200mm Spigot Tail  DS781
Underground Drainage
Sewers

<table>
<thead>
<tr>
<th>Product Code</th>
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<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>200mm</td>
<td>250mm</td>
<td>315mm</td>
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**Access Pipe**

- DS739

**Reducer Level Invert**

- 160mm DS738 DS762
- 200mm DS763

**Socket Plug**

- Also for on-site Socket Protection DS737

**Non Return Valve**

- Spigot Tail NRV200

**Typical Installation**

Install the Hunter non-return valve into its own chamber to make periodic inspection easier.

Ensure that it is installed the right way round (socket upstream).

In accordance with Part H of the Building Regulations and British Standards BS EN752: 1998, where a drain is liable to surcharge, measures should be taken to protect any building and ancillary area likely to be adversely affected. The measures necessary to protect a drainage system or building from surcharge should be as simple a possible and be so arranged as to have minimal effect on the drainage system.
Design Information

General Layout

The layout of drains should comply with the relevant Buildings Regulations and British Standard Codes of Practice. The following is intended as a guide only. The layout of any drainage system should be as simple as practicable. The following detailed design considerations apply to all drains.

A drainage system must be planned and laid in such a manner that effluent is conveyed from the house to the sewer, cesspool or other places of disposal as speedily as possible and without causing an unacceptable nuisance, or danger to health. Drains must be constructed so as to be as far as possible self-cleansing and reduce the risk of blockages to a minimum, whilst adequate means of access must be provided for the purpose of inspection, testing and clearing should an obstruction take place. Drains must be watertight to prevent pollution of the surrounding ground by soil wastes, and adequate ventilation is essential.

Standards

- PVCu drainpipes and fittings produced in accordance with BS EN 1401-1: 1998 and with BS4660: 1989 should be installed in accordance with:
  - BS EN 1295-1: 1998 structural design of buried pipelines under various conditions of loading
  - BS EN 1610-1: 1998 construction and testing of drain and sewers
  - BS EN 752: Drain and sewer systems outside buildings.
Good practice guide

1. Pipes to be laid at such a gradient as to ensure a self-cleansing velocity.
2. Pipes to be of sufficient size to cope effectively with the maximum load to be carried.
3. Efficient means of ventilation to be provided and maintained.
4. Adequate means of access to be provided.
5. Length of branch drains to be kept to a minimum and all junctions to be made in the direction of flow.
6. Pipes to have watertight joints.
7. Every part of the drainage system to be adequately supported.
8. So far as circumstances will permit, drains should not pass under buildings.
9. Drains to be laid as far as possible in straight lines between points where access is provided.
10. Drains not to be laid in close proximity to trees owing to the possibility of damage being caused by roots.

Bedding and Backfilling

For full information on bedding and backfilling procedures, please refer to our website: www.hunterplastics.co.uk
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