

Harmer Drainage Systems Backflow Valves

A comprehensive range of single and double flap non-return valves that prevent the back flow of rainwater or waste drainage.



Backflow Valves - Benefits

Increases in heavy rainfall events has made the occurrence of flooding from storm water drains more common. Harmer backflow valves offer a competitive, proven solution effectively protecting properties from the rising problem of flood water backflow from below ground drainage systems.

Design Function and Flexibility

- Harmer Backflow valves are equipped with automatic closing system that starts to operate when flood-water appears and are equipped with an emergency manually-operated closing system
- Harmer Backflow valves effectively protect a building from unpleasant odours getting inside a building when drain and sewerage systems are not used for longer periods
- Harmer Backflow valves reduce the risk of rodents getting inside a building through drain and sewerage systems

Robust Construction

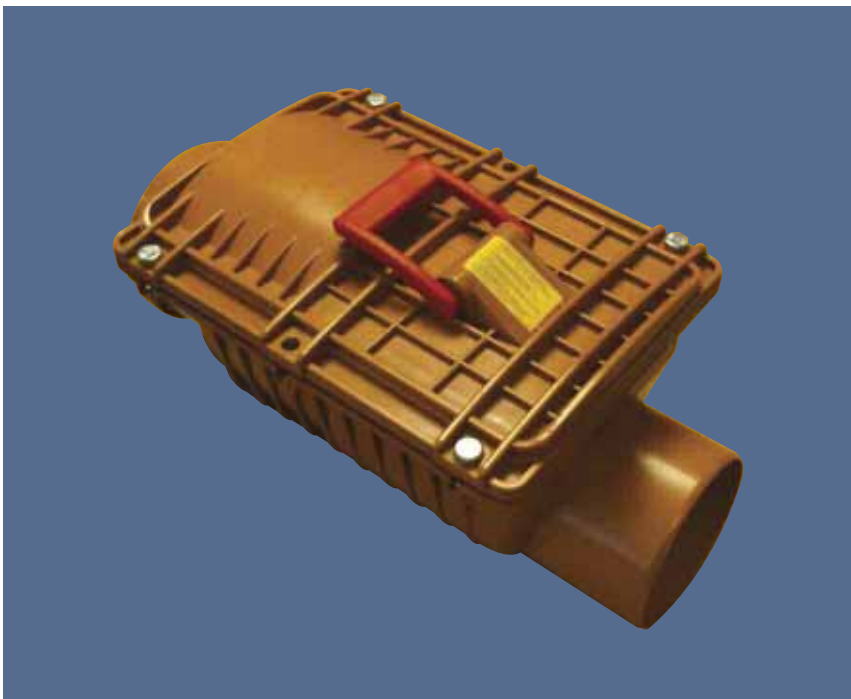
- Harmer Backflow valves are made from impervious ABS giving excellent impact resistance and good resistance to acids and bases
- Harmer Backflow valves incorporate a stainless steel cover to internal flaps which avoid potential for any 'gnawing' damage from rodents
- Cover incorporates stainless steel fixings for life long performance

Standards

- Production of components is controlled under an ISO 9001:2008 Quality Management System

Ease of Maintenance

- Harmer Backwater valves incorporate access covers for easy periodic maintenance or access to remove any trapped material.



Backflow Valves - Product Range Summary

Harmer backflow valves are available in single flap options for incorporation in drainage systems from 50mm to 200mm diameter and in double flap options from 110mm to 200mm diameter.

Single Flap Backflow Valves



Installation of the single flap backflow valve protects the properties up stream of the valve from storm water caused by blockage or flooding of the main storm water drainage system. The internal flap also stop rodents from entering the pipes and is made of stainless steel to avoid potential for rodent 'gnawing'.

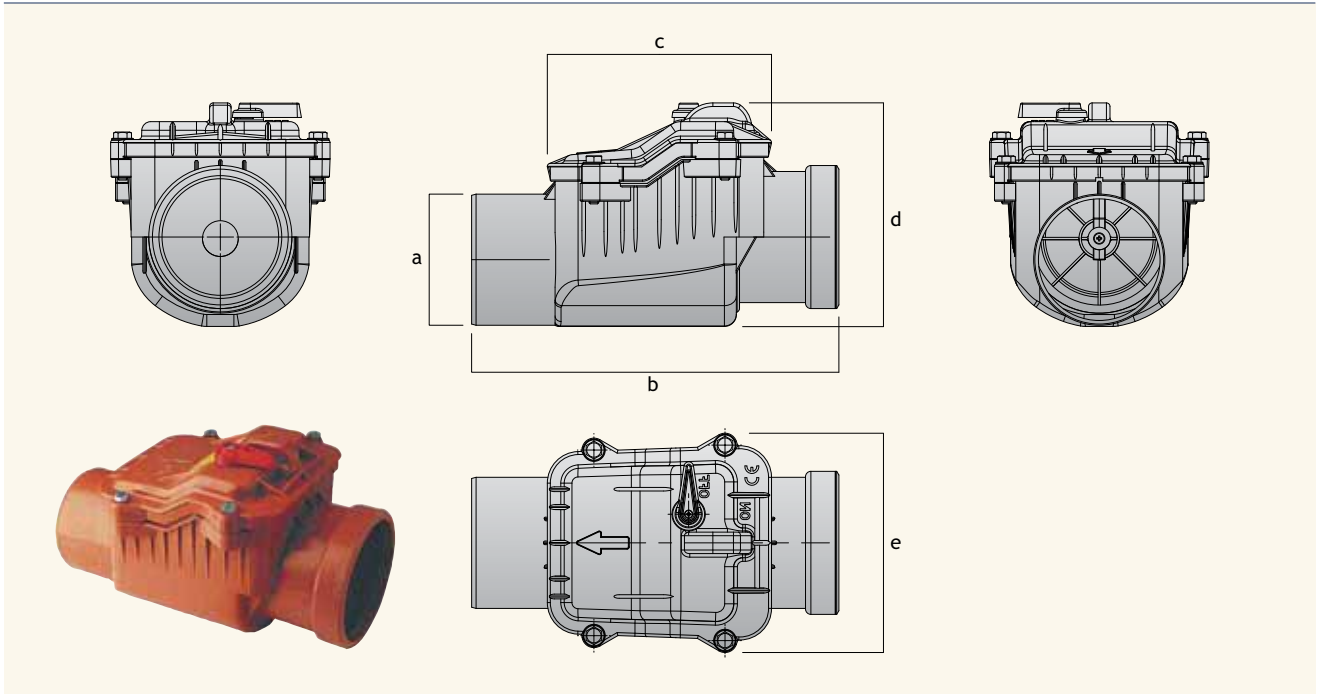
Double Flap Backflow Valves



Installation of the double flap backflow valve gives double protection to properties up stream of the valve from storm water caused by blockage or flooding of the main storm water drainage system. The double internal flaps stop rodents from entering the pipes and is made of stainless steel to avoid potential for rodent 'gnawing' and in addition gives security in case the upstream flap is kept partially open by waste at the time of flooding.

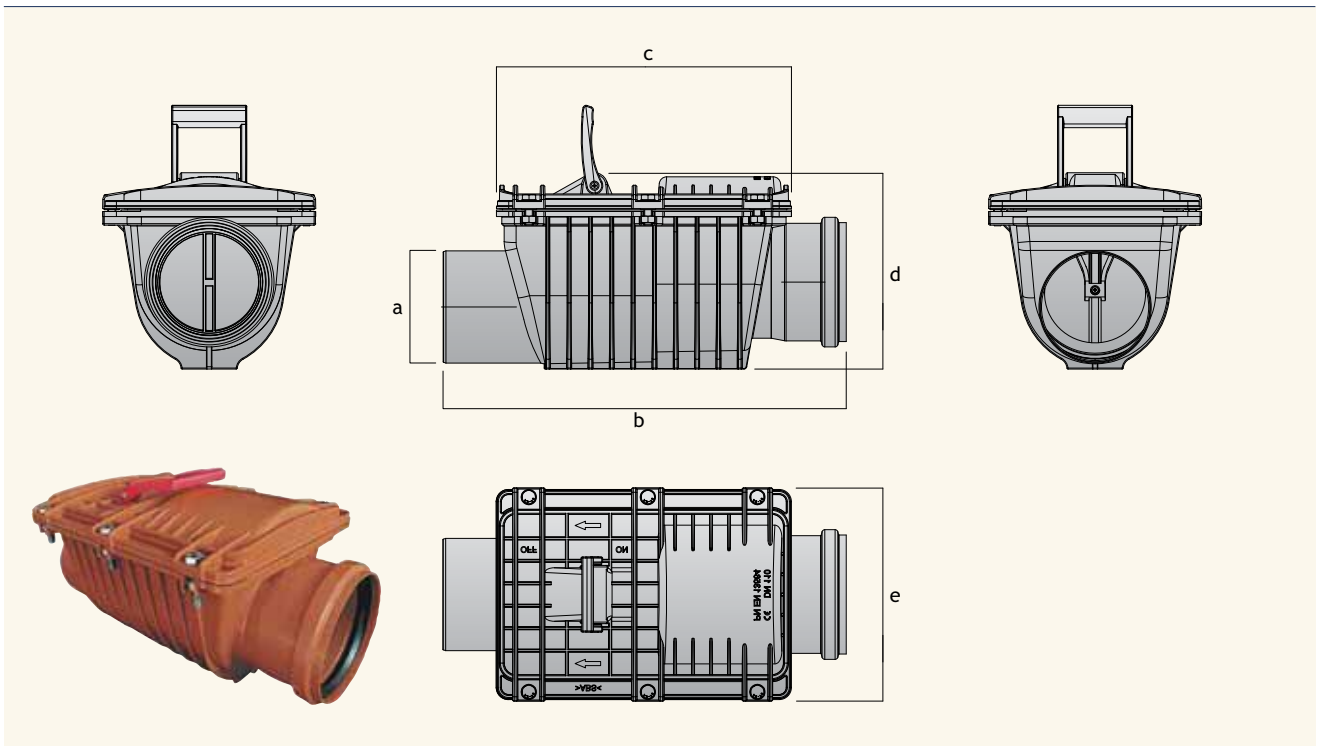
Backflow Valves - Product Tables

Single Flap Backflow Valve 110



Outlet Size (mm)	Connections	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	Product Code
110	Push-fit socketed (inlet); proprietary coupling (outlet)	110	308	188	188	184	HBF110S

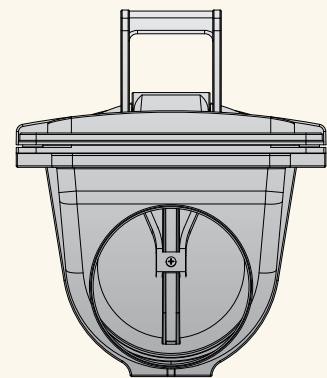
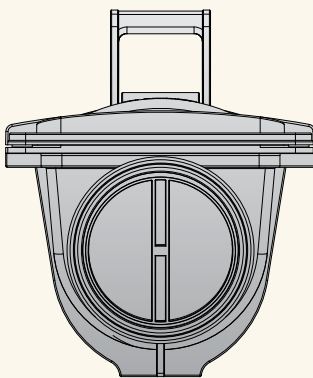
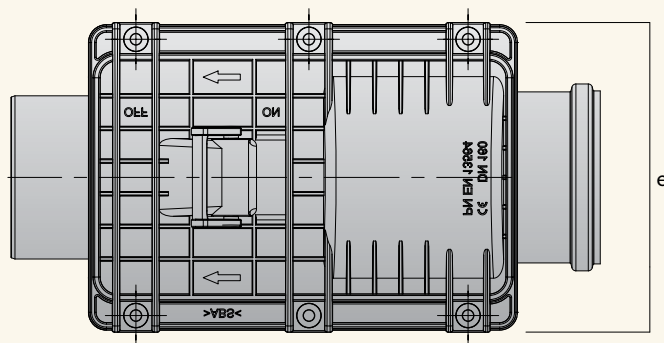
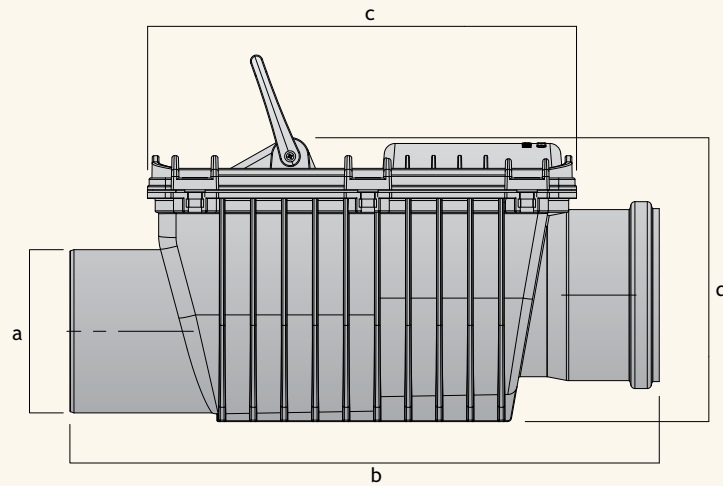
Double Flap Backflow Valve 110



Outlet Size (mm)	Connections	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	Product Code
110	Push-fit socketed (inlet); proprietary coupling (outlet)	110	395	289	192	209	HBF110D

Backflow Valves - Product Tables

Double Flap Backflow Valve 160



Outlet Size (mm)	Connections	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	Product Code
160	Push-fit socketed (inlet); proprietary coupling (outlet)	160	578	420	278	304	HBF160D

Backflow Valves - Additional Models

Single Flap Range



50mm Single



50mm Single



100mm Single
(alternative to HBF110S)



125mm Single



160mm Single

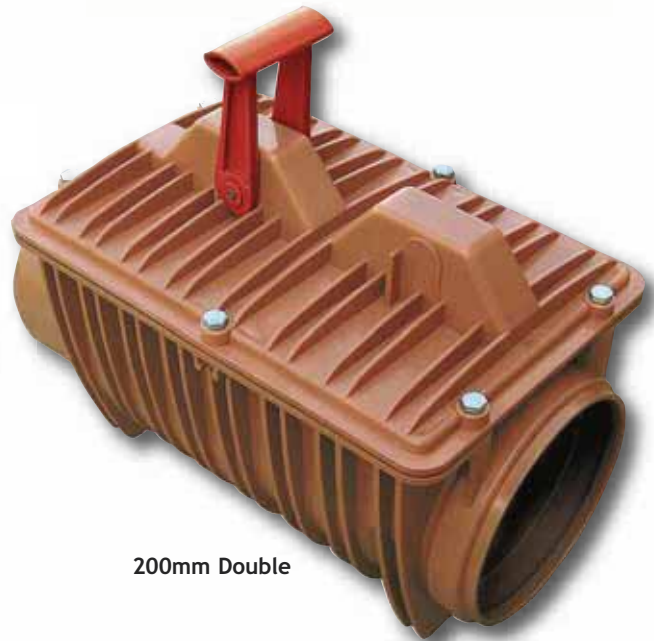


200mm Single

Double Flap Range



125mm Double



200mm Double

Additional models available upon request.

For further information, contact
Harmer Technical Department

Backflow Valves - NBS Specification & General Specification

A typical NBS Specification for Harmer Backflow Valves. A full range of NBS specifications and floor drainage calculators are available via the Harmer online NBS Specification Builder at www.harmerdrainage.co.uk. For project specific specification advice, contact Harmer Technical Services.

NBSPlus

NBS Specification

R11 Above Ground Foul Drainage Systems

To be read with Preliminaries/General Conditions

GENERAL

- 115 ABOVE GROUND FOUL DRAINAGE SYSTEMS
- Sanitary and floor drainage outlets: As per detail sections below
 - Waste pipework: As per detail sections below
 - Discharge stack and branch pipework: As per detail sections below
 - Separate ventilating pipework: As per detail sections below
 - Accessories: As per detail sections below
 - Disposal: As per detail sections below

SYSTEM PERFORMANCE

- 210 DESIGN
- Complete the design of the above ground foul drainage system
 - Standard: BS EN 13564 Type 1, 2 or 3 and BS EN 1253
 - Proposals: Submit drawings, technical information, calculations and manufacture's literature
- 220 COLLECTION AND DISTRIBUTION OF FOUL WATER
- General: Complete, and without leakage or noise nuisance
- 230 DESIGN PARAMETERS - GENERAL
- Quick, quiet and complete, self-cleansing in normal use, without blockage, cross-flow, back-fall, leakage, odours, noise nuisance or risk to health
 - Pressure fluctuations in pipework (maximum): ± 38 mm water gauge
 - Water seal retained in traps (minimum): 25mm

PRODUCTS

- 310 HARMER FLOOR DRAINAGE
- Floor Construction: Concrete slab
 Manufacturer: Alumasc Exterior Building Products Ltd,
 White House Works, Bold Road, Sutton, St Helens, Merseyside WA9 4JG
 Tel: 01744 648400, Fax: 01744 648401.
 Email: harmer@alumasc-exteriors.co.uk
- Reference: Harmer Polymer Backflow Valve
 Material: Plastic Polymer
 Outlet Type: 110/125/160/200mm Dia
 Flap Control: Single Flap/Double Flap (ABS/Stainless Steel)
 Access Chamber: Required/Not required
 Load Class: L15/K3
 Cover Type: Recessed/Solid
 Backflow Operation: Manual/Automatic
 Product Code: Refer to tables
 Accessories: Access Cover Extension/Conversion Kit/Cover Plate/Multistop/
 Hair Filter/Inlet & Outlet/Cable Extension/Rat Protection Flap



Create Harmer Drainage NBS specifications by selecting the required product range, profile, size and finish by visiting: www.harmerdrainage.co.uk

General Specification Notes

PRODUCTS

- 355 HARMER FLOOR DRAINAGE
- Floor Construction: Concrete Slab
- Manufacturer:
 Alumasc Exterior Building Products Ltd,
 White House Works, Bold Road, Sutton,
 St Helens, Merseyside WA9 4JG
- Tel: 01744 648400, Fax: 01744 648401.
 Email: harmer@alumasc-exteriors.co.uk
- Reference: Harmer Polymer Backflow Valve
 Material: Plastic Polymer
 Outlet Type: $\varnothing 110$ mm
 Flap Control: Single Flap ABS
 Access Chamber: Not Required
 Backflow Operation: Manual
 Product Code: HBF110S
 Accessories: Hair Filter/Rat Protection Flap

Backflow Valves - Operation & Design

Operation

When facing back flow sewage, Harmer double flap system automatically blocks the flow of water through the first flap. In case this flap is not completely shut (waste blockage), the second flap blocks the flow, thus preventing flooding. After the backwater recedes, free flow of sewage is automatically restored.

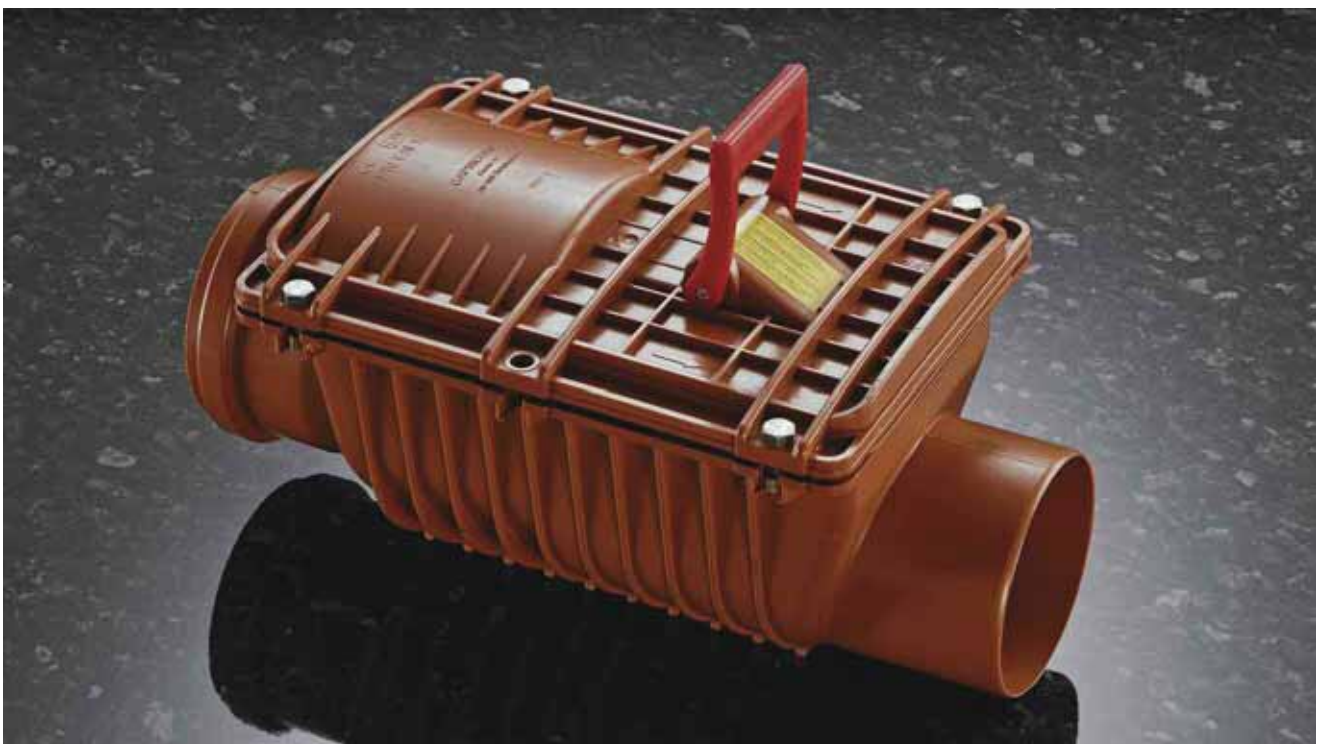
For the purpose of cleaning/servicing, the system has a manual override handle so that both flaps can be locked shut.

Design

1. Screws made of high quality stainless steel.
2. Regular maintenance is the key to correct operation of the valve flaps, made of stainless steel, gives additional protection from rodents and extends the operational life of the locking mechanism.
3. Reinforced structure (ABS), guarantees rigidity and durability.
4. Backwater valves effectively prevent unpleasant odours getting inside a building when drain and sewerage systems are not used for longer periods.
5. Backwater valves provide an easy method of access for performance of periodic maintenance of flaps. They should be inspected at least twice per year.

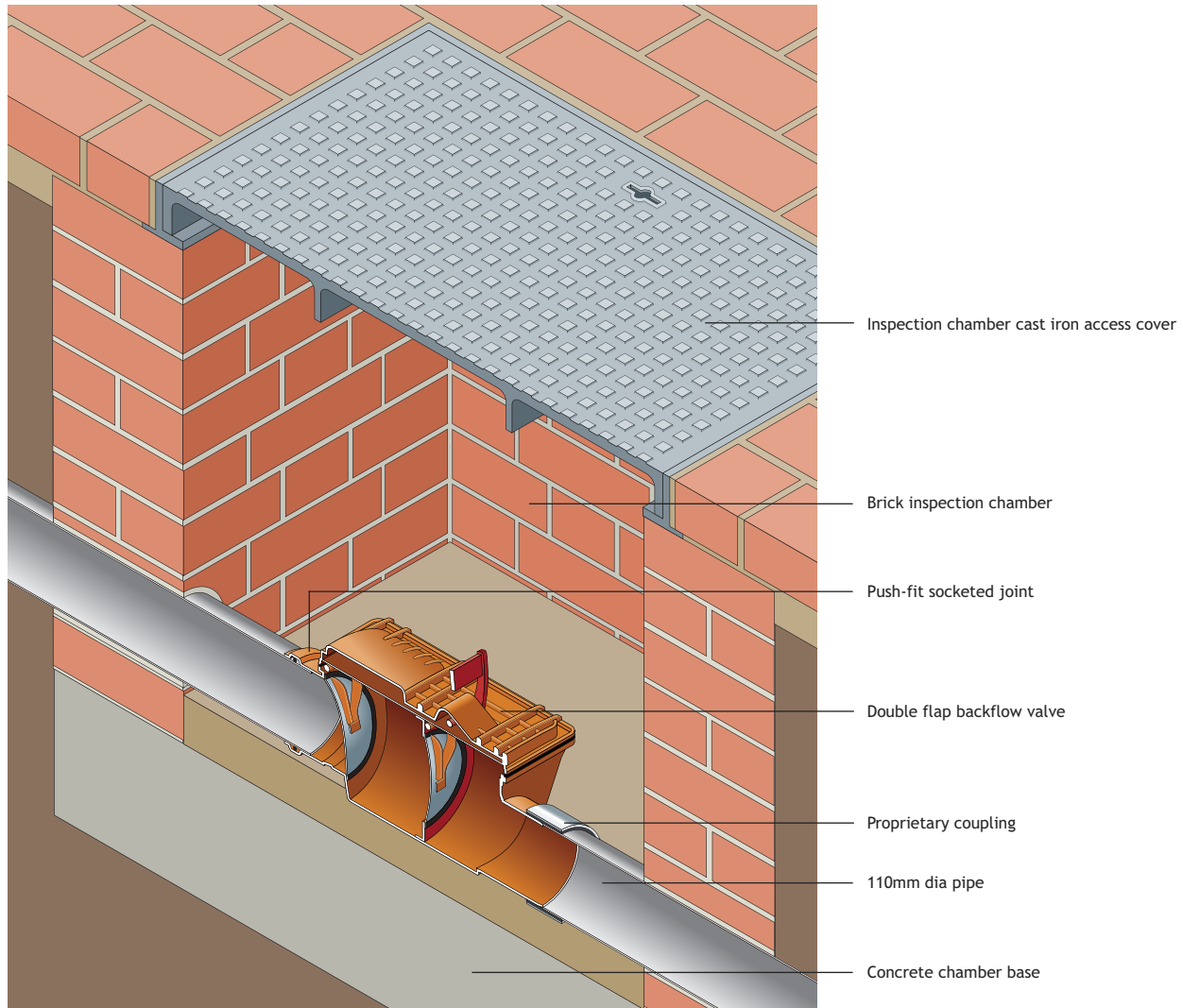
Single Flap versus Double Flap

Level of Protection Comparison	Single Flap Non-Return Valve	Double Flap Non-Return Valve
Protection Against Rodents	★	★ ★
Backwater Prevention	★	★ ★
Odour Prevention	★	★ ★



Backflow Valves - Application Details

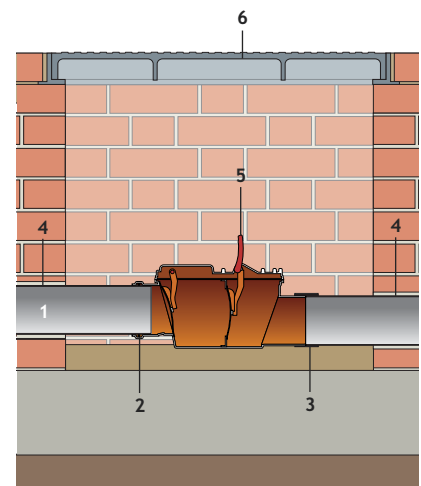
Double Flap Backflow Valve in brick inspection chamber



For sewage systems

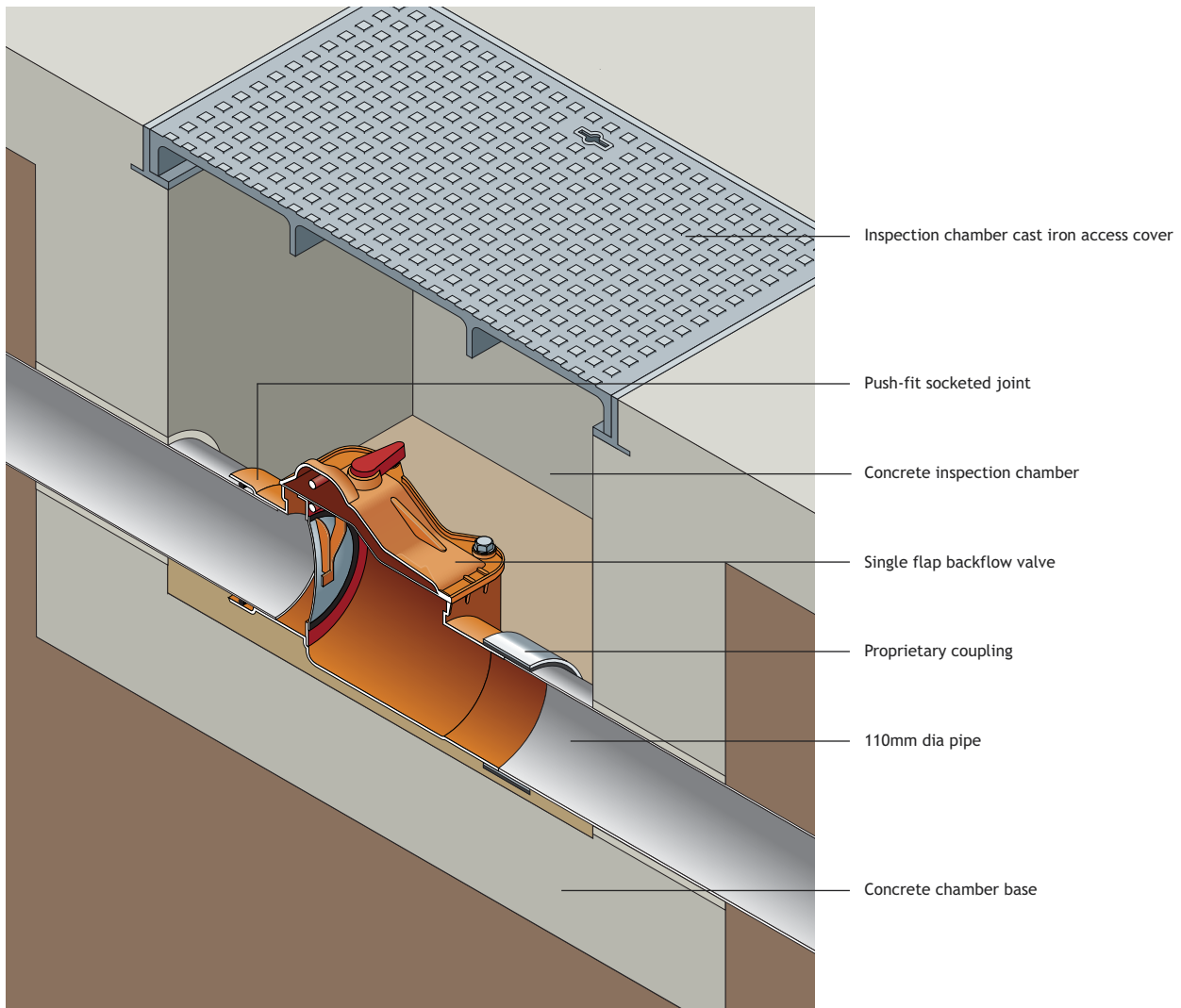
Sitework

1. Ensure underground pipe entering inspection chamber is laid to fall.
2. Centrally position backflow stop and push fit socketed end onto pipe.
3. Connect opposite side to adjoining pipe using proprietary coupling.
4. All pipework fittings **MUST** be sealed at inspection chamber wall protrusions.
5. Ensure top lever handle is in the "ON" position to allow waste water discharge.
6. Fit inspection chamber access cover.



Backflow Valves - Application Details

Single Flap Backflow Valve in concrete inspection chamber



For storm water systems

Sitework

1. Ensure underground pipe entering inspection chamber is laid to fall.
2. Centrally position backflow stop and push fit socketed end onto pipe.
3. Connect opposite side to adjoining pipe using proprietary coupling.
4. All pipework fittings **MUST** be sealed at inspection chamber wall protrusions.
5. Ensure top lever handle is in the "ON" position to allow waste water discharge.
6. Fit inspection chamber access cover.

