

Product Catalogue



The Flexseal company

Flexseal is a specialist manufacturer and distributor to the civils & drainage, plumbing and water management sectors.

With a reputation for supplying high quality products, Flexseal offers a service to match and operates with a spirit of innovation across all areas of the company. Flexseal's focus is to add value to all the links in the supply chain, from re-sellers to end users of our products.

The manufacture of flexible couplings for the repair of sewer and drainage systems has been at the heart of the company since it was established in 1988. The company has since developed a wide range of complementary products related to the movement of water, which build on the company's expertise at creating watertight seals and joints and on its knowledge of the above market sectors.

Core product ranges in each of the company's key areas include:



- Flexible couplings for drainage applications • Lateral connections
- Pipe seals •



- Flexible couplings for plumbing applications • Soil manifold
- AirSure air admittance valves •



- Non-return and backwater valves • Penstocks • Flap valves
- Channel drainage •

Flexseal is a UK-based company; a core member of the Fernco Group. The Group is headquartered in the USA, with operations in Europe, Australia and North, Central and South America, offering an extensive range of inter-related products across the Globe.



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Retrofit Non-Return Valve



Applies to NRV4 only

For simple retrofit installation into existing manholes

Introduction

To prevent foul water flowing back from the blocked sewerage system to flood the property from the inside via toilets, plug holes and waste pipes.

These unique and patented Retrofit Non-Return Valves can be simply pushed in to the existing pipework, whether plastic or clay, at the property's inspection chamber. The valves can be fitted in minutes and do not require any specialist expertise or equipment.

Benefits

- Simple push-fit installation into existing manhole - takes approximately 80% less time to fit than a conventional valve
- Unobtrusive when installed
- Two sizes available to suit DN110 and DN160 pipes
- Products available for clay and plastic pipe systems
- WRc approved product, Cert. No. PT/314/0111 & tested & approved to BS EN 13654
- Protects against pests, such as rats and other vermin, as well as backwater
- Version available with stainless steel rat block cap for improved protection against rodent infestation



Product Range

Product Code	Description
NRV4	100mm Non return valve for 110mm Plastic Pipe
NRV4/SS	100mm Non return valve for 110mm Plastic Pipe with stainless steel flap
NRV4CLAY	100mm Non return valve for DN100 Clay pipe
NRV4CLAY/SS	100mm Non return valve for DN100 Clay pipe with stainless steel flap
NRV6	150mm Non return valve for 160mm Plastic Pipe
NRV6/SS	150mm Non return valve for 160mm Plastic Pipe with stainless steel flap

In-Line Backwater Valves

A range of single-flap and double-flap valves for installation onto sewerage pipes

Introduction

Protect buildings against backwater flooding due to rainwater travelling back up the sewerage system.

Automatically operated, providing free-flow wastewater drainage according to the slope of the rainwater drain. These backwater valves are available in a wide range of sizes and are easy to install in waste water networks and systems with pipes of Ø110 to Ø200.

Benefits

- Backwater valves are 100% tested for safety and comply with the guidelines set out in BS EN 13564
- Robust design and maintenance-free operation

Characteristics

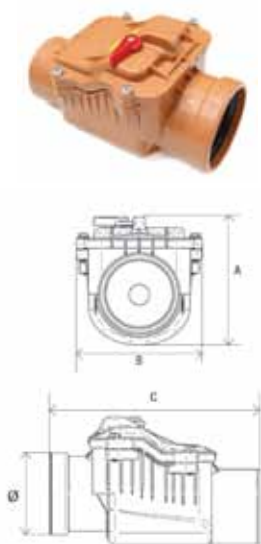
- Stainless steel anti-flooding flaps
- Special design of the body minimises the risk of solid waste accumulating and blocking inside the valve
- Also suitable as a rodent deterrent



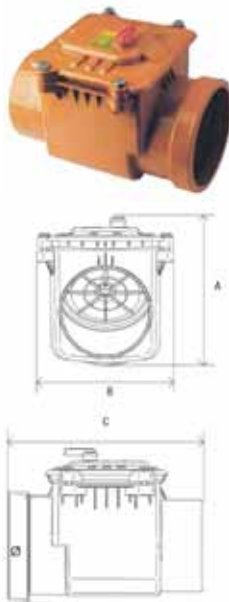
Backwater Valves, Single Flap - Suitable for stormwater applications

Product Code	Description	Ø (mm)	A Height (mm)	B Width (mm)	C Length (mm)	Weight (Kg)
BWV110/1	110mm Backwater Valve	110	200	190	310	1.42
BWV160/1	160mm Backwater Valve	160	260	235	340	2.3
BWV200/1	200mm Backwater Valve	200	353	304	560	6.6

110mm



160mm



200mm

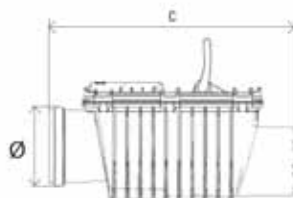


In-Line Backwater Valves

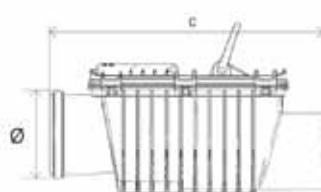
Backwater Valves, Double Flap - Suitable for foul sewerage systems

Product Code	Description	Ø (mm)	A Height (mm)	B Width (mm)	C Length (mm)	Weight (Kg)
BWV110/2	110mm Backwater Valve	110	195	205	395	1.86
BWV160/2	160mm Backwater Valve	160	273	304	577	5.05
BWV200/2	200mm Backwater Valve	200	353	304	560	7.5

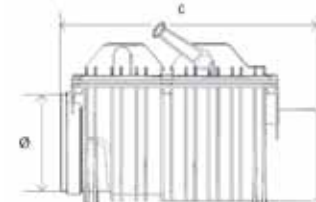
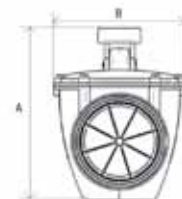
110mm



160mm



200mm



HDPE Flap Valves

In partnership with



A flap valve is a simple, one-way valve used in surface water drainage associated with rivers, estuaries and seawater outfalls.

Introduction

Flap valves are designed to operate under very low heads of water, in gravity flow applications, at ambient conditions between -65° and $+85^{\circ}$ C. The valve prevents backwater via a spring-loaded or weighted flap placed across the opening of a pipe, tube or duct.

In Flexseal Flap Valves, the flap and back plate are manufactured in HDPE, with a stainless steel 316 hinge-pin, counterweight and attachments. Due to the specific gravity of the HDPE, a stainless steel counterweight is fitted to ensure closure when back-pressure is present; however very low heads of water are required to open the flap, as the design is such that the counterweight balances the flap correctly.

The Flap Valve incorporates a lip seal, to provide the seal between the flap and frame, and also a self-adhesive neoprene seal to install between the frame and wall, which is fitted to prevent leakage.

Flexseal offers wall-mounted flap valves up to and including 1000mm in size and spigot-mounted flap valves up to and including 600mm. Flange-mounted and bespoke flap valves are available on request.



HDPE Flap Valves

In partnership with



Benefits

- High quality range manufactured in the UK by Waterfront Fluid Controls, already supplying to the Environment Agency and Water Companies
- Lighter weight than traditional cast iron flap valves, leading to easier installation and lower installation costs
- Heavy duty HDPE will withstand being struck by rocks and other debris, present in marine and river environments, which would shatter lighter weight plastics
- Waterproof qualities all the way through, not reliant on maintaining an added layer
- Not at risk from theft as no inherent scrap value
- Stainless steel hinges require minimum maintenance
- All models up to DN400 can withstand a constant pressure of 6 mwc as standard
- Technical support available from both the Flexseal and Waterfront Fluid Controls teams
- 25 year minimum life expectancy
- Manufactured to DIN 19569-4

HDPE Flap Valves - Cracking Head

Standard Flap Valves				Tidal Flap Valves			
Nominal Diameter	Opening Pressure (Cracking Head) Above Water (mm)	Opening Pressure (Cracking Head) Under Water (mm)	Inclination (°)	Nominal Diameter	Opening Pressure (Cracking Head) Above Water (mm)	Opening Pressure (Cracking Head) Under Water (mm)	Inclination (°)
100	10	10	0	100	20	10	10
125	10	10	0	125	20	10	10
150	10	10	0	150	20	10	10
200	10	10	0	200	20	10	10
250	10	10	0	250	20	10	10
300	10	10	0	300	20	10	10
400	10	10	0	400	20	10	10
500	10	10	0	500	20	10	10
600	10	10	0	600	20	10	10
700	75	20	0	700	75	40	10
800	75	20	0	800	75	40	10
900	75	20	0	900	75	40	10
1000	100	30	0	1000	75	40	10
1200	100	30	0	1200	250	50	10
1250	100	30	0	1250	250	50	10
1500	100	30	0	1500	250	50	10

Wall-mounted Flap Valves

In partnership with

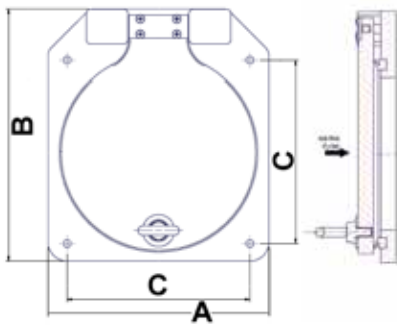


Characteristics

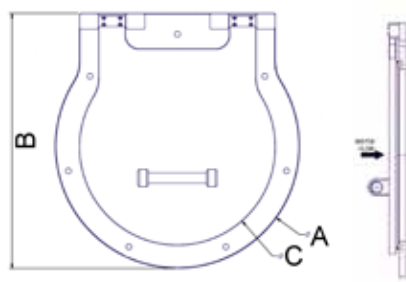
- Sizes available: 125 - 1260mm
- Can be mounted on flat structures of PVC or concrete or onto an internal rounded pit
- Superior mounting kits (available separately) include long bolts for secure installation
- Lip seal between flap and frame, for a watertight seal
- Supplied with self-adhesive neoprene seal

Product Code	Description	A Total Valve Width (mm)	B Total Valve Height (mm)	C Flap width (mm)	Pressure (mwc)	Weight (Kg)
FV100	100mm Wall Mounted Flap Valve	190	230	145	10	1.7
FV125	125mm Wall Mounted Flap Valve	215	255	165	15	2.0
FV150	150mm Wall Mounted Flap Valve	240	280	190	10	2.2
FV200	200mm Wall Mounted Flap Valve	290	330	240	10	2.8
FV250	250mm Wall Mounted Flap Valve	340	380	290	10	3.5
FV300	300mm Wall Mounted Flap Valve	390	430	340	10	4.3

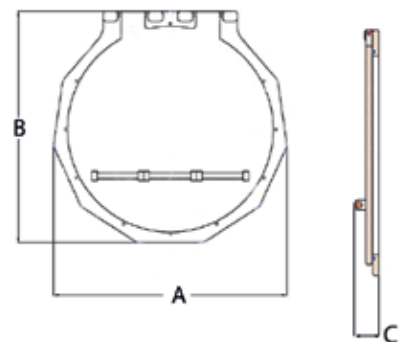
Product Code	Description	A Total Valve Circumf. (Ø)	B Total Valve Height (mm)	C Flap Circumf. (Ø)	Pressure (mwc)	Weight (Kg)
FV400	400mm Wall Mounted Flap Valve	610	640	470	6	9.3
FV500	500mm Wall Mounted Flap Valve	710	740	570	4	12.1
FV600	600mm Wall Mounted Flap Valve	810	855	670	3	15.6



DN100 - 300 version



DN400 - 600 version



DN700 - 1000 version

Product Code	Description	A Total Valve Width (mm)	B Total Valve Height (mm)	C Total Valve Depth (mm)	Pressure (mwc)	Weight (Kg)
FV700	700mm Wall Mounted Flap Valve	960	960	165	4	29
FV800	800mm Wall Mounted Flap Valve	1056	1087	165	3	34
FV900	900mm Wall Mounted Flap Valve	1150	1180	165	2.5	41
FV1000	1000mm Wall Mounted Flap Valve	1274	1274	165	2	47

Wall-mounted Flap Valves - Mounting Sets

In partnership with



Product Code	Description	Bolts (qty)	Chemical Anchor Capsules (qty)	EPDM Seal (mm)
FVMS100	100mm Flap Valve Mounting Set	4	4	50 x 5 x 700
FVMS125	125mm Flap Valve Mounting Set	4	4	50 x 5 x 900
FVMS150	150mm Flap Valve Mounting Set	4	4	50 x 5 x 1000
FVMS200	200mm Flap Valve Mounting Set	4	4	50 x 5 x 1100
FVMS250	250mm Flap Valve Mounting Set	4	4	50 x 5 x 1300
FVMS300	300mm Flap Valve Mounting Set	4	4	50 x 5 x 1600
FVMS400	400mm Flap Valve Mounting Set	6	6	50 x 5 x 1800
FVMS500	500mm Flap Valve Mounting Set	6	6	50 x 5 x 2100
FVMS600	600mm Flap Valve Mounting Set	8	8	50 x 5 x 2500
FVMS700	700mm Flap Valve Mounting Set	8	8	50 x 5 x 3000
FVMS800	800mm Flap Valve Mounting Set	10	10	50 x 5 x 3400
FVMS900	900mm Flap Valve Mounting Set	10	10	50 x 5 x 3900
FVMS1000	1000mm Flap Valve Mounting Set	12	12	50 x 5 x 4400

Mounting Sets include:

- M8 capsules & fixings for DN100-300 sizes or M12 capsules & fixings for DN400 sizes and larger;
- Chemical resin capsules;
- Stainless Steel 1.4401 (316) anchor fixings; plus
- Fitting tool.



Spigot-mounted Flap Valves

In partnership with



Characteristics

- Sizes available: 125 - 600mm
- Flap valve pushes into host pipe
- Supplied with self-adhesive neoprene seal, to install onto spigot
- Also available: angled spigot-mounted flap valves to prevent chattering in marine applications



Product Code	Description	H (mm)	W (mm)	D (mm)	Weight (Kg)
FV100S	100mm Spigot Mounted Flap Valve	230	190	250	3.5
FV125S	125mm Spigot Mounted Flap Valve	255	215	250	4
FV150S	150mm Spigot Mounted Flap Valve	280	240	250	4
FV200S	200mm Spigot Mounted Flap Valve	330	290	250	5
FV225S	225mm Spigot Mounted Flap Valve	380	340	250	7
FV250S	250mm Spigot Mounted Flap Valve	380	340	250	7
FV300S	300mm Spigot Mounted Flap Valve	430	390	250	8
FV350S	350mm Spigot Mounted Flap Valve	640	610	250	11
FV400S	400mm Spigot Mounted Flap Valve	640	610	250	11
FV450S	450mm Spigot Mounted Flap Valve	740	710	250	14
FV500S	500mm Spigot Mounted Flap Valve	740	710	250	14
FV600S	600mm Spigot Mounted Flap Valve	850	810	250	18

Other flap valves available from Flexseal



Flange-mounted flap valves



Bespoke flap valves



Fish-friendly flap valves

Stainless Steel & HDPE Penstocks

In partnership with



A sluice gate for controlling water flow, available in a wide range of sizes



Introduction

Penstocks are used to control liquid flow, in applications that include water, waste water and sewage treatment plants, drainage infrastructure, waterways, power plants, industrial effluent plants and hydro power.

Operators can control water flow through the penstock by fully opening the gate, fully closing it or partly opening it, as the situation requires. They can play an important role in flood control situations.

There is a range of operating gear options available, from spindle extension sets through to fully automated systems. Non-rising spindles are fitted as standard, although rising spindles are also available.

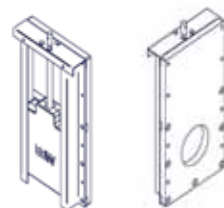
Benefits

- Manufactured to BS7775
- Much lighter in weight than penstocks of other materials, with no cranes required during installation
- Gasket forms watertight seal between penstock and wall, so that grouting is not necessary
- The above benefits can reduce installation time from an average of three days with traditional penstocks, down to around three hours on average
- Wedgeless design reduces complexity, lowering the possibility of issues in service
- Self-lubricating door nut requires no maintenance, provided the penstock is operated once a year
- Materials used are corrosion resistant, offering a long life and low maintenance costs
- A range of operating gear options available, including spindle extension sets, rising spindles and fully automated systems
- Stainless steel penstocks also available on request

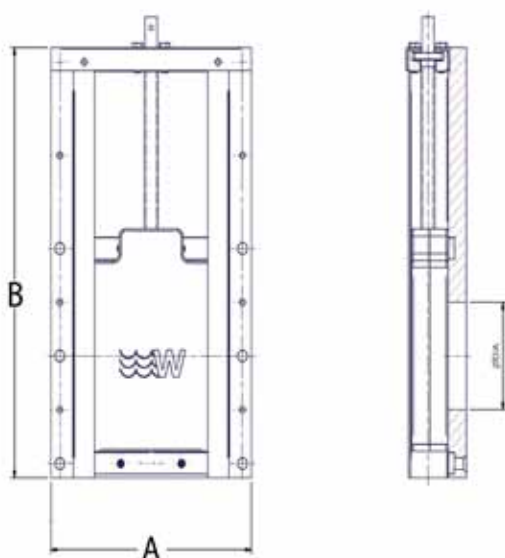
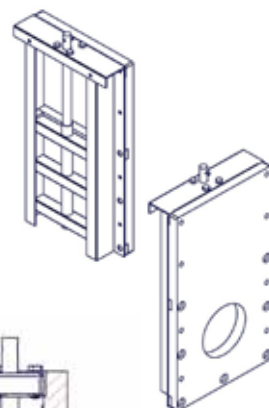
Construction Materials		
Component	Standard materials	Options
Frame	Grade 304 stainless steel (1.4301)	Grade 316 stainless steel (1.4401)
Slide gate	HMPE 500	Grade 316 stainless steel (1.4401)
Backing plate	HDPE 300	
Reinforcements	Grade 304 stainless steel (1.4301)	Grade 316 stainless steel (1.4401)
Non-rising spindle	Grade 304 stainless steel (1.4301) TR25 x 7.5	
Spindle bearing	PTFE	
Door nut	POM (self lubricating)	Bronze
Bolts & nuts	Stainless steel A4	
Seal	NBR	

Standard Series Product Range

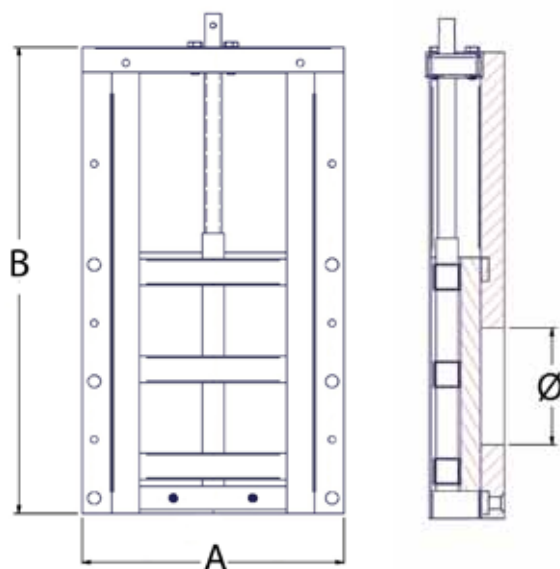
Product Code	Diameter (Ø)	A Total Width (mm)	B Total Height (mm)	Pressure (mwc)	Weight (Kg)	Mounting Set
PS150	150	330	600	6	16.5	PSMS150
PS200	200	380	680	6	22	PSMS200
PS250	250	430	780	6	26	PSMS250
PS300	300	480	880	6	31	PSMS300



Product Code	Diameter (Ø)	A Total Width (mm)	B Total Height (mm)	Pressure (mwc)	Weight (Kg)	Mounting Set
PS400	400	670	1155	6	55	PSMS400
PS500	500	770	1370	6	75	PSMS500
PS600	600	870	1550	6	90	PSMS600



For ø DN 150 - 300 products



For ø DN 400 - 600 products



Optional features, also available:

- Non-standard sizes
- Electric, hydraulic or pneumatic operating systems
- Rising spindle
- Wedge construction
- Accessories, including hand wheels, guide brackets, tee keys and caps

Storm Drain Plus

Domestic Channel Drain

ø 100, 110 mm



Class A15 (BS EN 1433: 2002)

Storm Drain Plus offers a complete, easy to install system, for the drainage of surface water for domestic applications.



Introduction

Storm Drain Plus channels are available in 1 metre sections. They feature 3 vertical outlets for flexibility, as well as horizontal entry/outlet points which can be connected to either 100mm or 110mm pipes. The complete range of accessories combines to create a full, flexible system, with features for easy installation.

Storm Drain Plus is offered with Heelguard grates as standard, in a choice of black plastic or galvanised finishes. The grills conform to BS EN 1433: Class A15 and can withstand a 1.5 tonne loading. The system can therefore be installed in pedestrian areas, on sports pitches, at swimming pools, in walkways and where light vehicles may drive over.

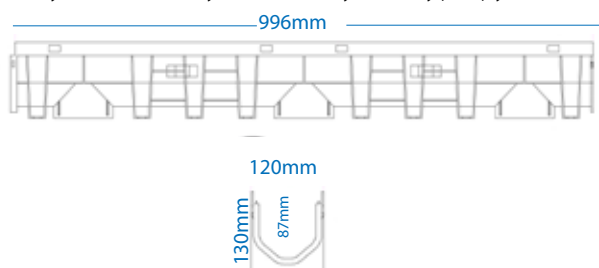
Benefits

- Heelguard grates as standard
- Recycled and recyclable base material
- Conforms to BS EN 1433 - Load Class A15
- Labour saving quad connector
- Sump unit with integral water trap to prevent odours
- Improved male to female connections
- Cross-braced design prevents floating
- Lightweight polypropylene, with a high impact strength at hot and cold temperatures

Technical Information

Material: Recycled and recyclable body in Polypropylene; Reinforcing bracket to avoid deformation

Dimensions:



Flow capacity: Up to 4.5 l/s



Storm Drain Plus Domestic Channel Drain

Product Range

Product Code	Description	Length (m)	Weight (kg)
STDP1000	Channel with black plastic grate	1	2.08
STDP1000G	Channel with galvanised grate	1	2.99
STDPQC	Quad connector in black plastic	0.123	0.28
STDPQCG	Quad connector with galvanised grate	0.123	0.45
STDPEC	Secure end cap	N/A	0.05
STDPEO/100	End outlet 100 mm	N/A	0.08
STDPEO/110	End outlet 110 mm	N/A	0.08
STDPSUMP	Sump unit with silt basket and water trap with black plastic grate	0.33 (0.39 deep)	
STDPSUMPGG	Sump unit with silt basket and water trap with galvanised grate	0.33 (0.39 deep)	
STDPLKIT	Bracket with locking screws		
CHANNELCLIP	Joining clip for the secure connection of two cut channels		



Quad connector



Sump unit



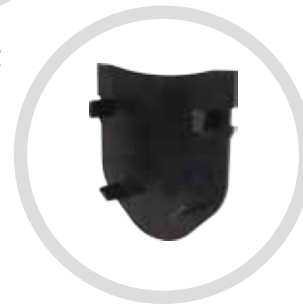
End outlet



Joining clip



Support bracket



End cap

Channel Drain Garage Pack, with 3 x 1m channels, end cap & outlet.
Available with plastic or galvanised grate

Product Code	Description	Length (m)	Weight (kg)
STDPGP/100	Black plastic grate, 100 mm outlet	1 (x 3 qty)	6.90
STDPGPG/100	Galvanised grate, 100 mm outlet	1 (x 3 qty)	9.65
STDPGP/110	Black plastic grate, 110 mm outlet	1 (x 3 qty)	6.90
STDPGPG/110	Galvanised grate, 110 mm outlet	1 (x 3 qty)	9.65



Commercial Channel Drain

ø 100 mm*

CE Class C250 & D400 (BS EN 1433: 2002)

A robust, safe to handle and easy to install commercial channel drainage range.

*Other sizes available on request.



Introduction

The high-density polyethylene moulded construction of the drainage channel combines lightness, strength and good fracture resistance, minimising stock damage and significantly reducing handling weight.

The commercial channel drain range is available in 1 metre lengths in a choice of 75mm and 150mm internal depths in BS EN1433 Class C250 and D400. An extended range of other specifications is available on request, up to and including Class F900 for airport runways. Please do not hesitate to contact our office for technical support.

Benefits

- Lightweight high density polyethylene (HDPE) body for easy and safe handling and fewer breakages.
- Channel designed to maximise water flow characteristics and self-cleaning properties.
- Interlocking channel tongue and groove "snap" joint – allows the installation of preassembled gratings on channels – saves time during construction.
- Excellent temperature resistance provides a -50°C to +100°C thermal range.
- Chemically inert to a wide range of acids, salts and hydrocarbons – suitable for chemical plants, workshops and also ideal for roads and other areas with a high use of anti-freezing salts.
- Micro-organism and mould-proof surface allows installation in areas requiring a high level of hygiene, for example the food industry.
- Innovative body design helps prevent floating during installation.

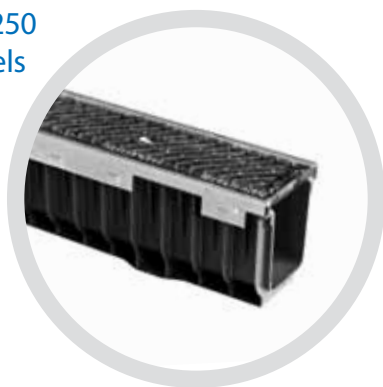


Commercial Channel Drain

Product Range

Product Code	Class	Weight (Kg)	Grate	Flow (l/s)	Pallet Qty
FTCC25010075	C250	10.36	Heelguard	9.32	64
FTCC250100150	C250	11.26	Heelguard	21.51	40
FTCD40010075	D400	12.96	Slotted	9.32	64
FTCD400100150	D400	13.86	Slotted	21.51	40

Class C250 channels

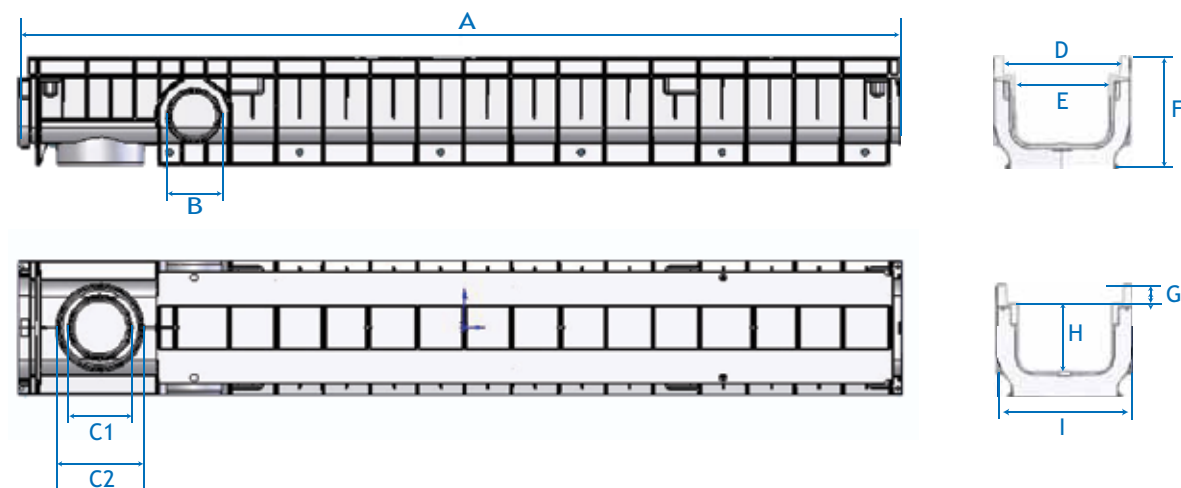


Class D400 channels



Please contact Flexseal for details on other commercial channel specifications, including with an F900 grate, a 200mm wide channel or other combinations.

Product Dimensions



Product Code	A Length	B Outlet	C1 Outlet	C2 Outlet	D Grate Width	E Internal Width	F Total Depth	G Grate Depth	H Internal Depth	I Total Width
FTCC25010075	1000	64	75	100	130	105	124	20	75	150
FTCC250100150	1000	64	75	100	130	105	200	20	150	150
FTCD40010075	1000	64	75	100	130	105	124	20	75	150
FTCD400100150	1000	64	75	100	130	105	200	20	150	150

AccessPoint

ø 70, 100 & 150 mm

Creates a professional, tidy, removable and watertight point of access for CCTV and drain clearance.



Introduction

The AccessPoint offers a secure point of entry into DN70, DN100 and DN150 plastic, ductile and cast iron pipes. It is designed for entry into drainage systems where no manhole exists, or there is no other means of access.

The core drill cuts a hole of 54mm and is supplied with an arbour and a pilot drill. Installation takes less than a minute, although this may increase when cutting into very old cast iron pipe.

Benefits

- Quick and easy installation
- Can be removed and refitted
- Withstands up to 1 bar
- Pre-assembled for direct insertion into the host pipe

The AccessPoint kit includes:

- 10 x Access Points
- 1 x De-burring tool
- 1 x 6mm Allen key
- 1 x 54mm Diamond core drill

Simple installation



Standards & Accreditations



Flexseal operates a Quality Management System which complies with the requirements of BS EN 9001:2008 (certificate No: FM91289), and an Environmental Management System which complies with the requirements of ISO 14001:2004 (certificate No. EMS 563613)

The scope for each is 'Design, development, manufacture and supply of pipe connection and water management systems. Repairs of pipes, sewers and water infrastructure'.

The following manufacturing standards are applicable to Flexseal range of Water Management products.

WRc Approved

The following products have gained WRc Approval:

- NRV4 Retrofit Non-Return Valve (p.4)



DIN, German National Standard

DIN 19569: Wastewater treatment plants - Principles for the design of structures and technical equipment - Part 4: Specific principles for shutoff devices as penstocks, sluice gates, stoplogs etc.

Applicable to:

- Wall-mounted flap valves (p.9)

British Standard

BS7775: Penstocks for use in water and other liquid flow applications

- Stainless Steel & HDPE Penstocks (p.12-13)



CE Marking

The CE mark is a claim that a construction product can be legally placed on the market of member states of the European Economic Area (EEA) and is based on the principal that the product is fit for purpose.

The following Flexseal Water Management products meet the requirements of the relevant harmonised standard, as follows:

- Storm Drain Plus Channel Drain (p.14-5) BS EN 1433: Load Class A15
- Commercial Channel Drain (p.16-7) BS EN 1433: Load Classes C250 and D400



A Declaration of Performance is available to give to customers if required which states the products listed are in conformity with the provisions of the Construction Products Regulation when installed in accordance with the installation instructions contained in the product documentation.

Other products available from Flexseal Water Management

- Storage & attenuation tanks
- Separators, interceptors & grease traps
- Cesspools, septic tanks & sewage treatment plants
- Pumps, pumping stations & spares
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