



# PDS

PIPELINE & DRAINAGE SYSTEMS LTD



## EnviroChamber

One-piece manhole chambers



# WELCOME TO PDS

## A reputation built through innovation

Pipeline & Drainage Systems are the market leaders in innovative kerb, channel, bridge & chamber drainage products. Since 2000, we have helped hundreds of clients meet the complex drainage requirements of their projects with solutions that continue to stand the test of time.

Our unique designs and materials are second-to-none and our products are accredited, guaranteed and supported by the most comprehensive installation guidelines in the industry.

We guarantee excellence in design, products and service for every customer.



PDS are proud to be part of the RPM global group of brands. RPM specialise in high-performance coatings, sealants and speciality chemicals. RPM products are sold in approximately 150 countries and territories.

As part of RPM, PDS are able to draw upon unparalleled levels of expertise to provide the most complete solution for the individual needs of our customers.



## EnviroChamber

The 100% recycled durable Envirochamber has had fantastic success in the utilities markets over the last 4 years. Due to the experience of our Directors in the Access Chamber markets, it was apparent that the product range was suitable for numerous other applications where a "hole" in the ground was required.

This brochure will show the range and its advantages over traditional materials.





# A Proven Solution

The **ENVIROCHAMBER** product range has been approved and used exclusively by a number of Water Authorities, and its obvious benefits cross over into other construction sectors where traditionally brick, concrete and lightweight plastic chambers have been used.

## North West

"It was imperative that we implemented the Envirochamber in our maintenance package as soon as possible irrelevant of the material listed in the contract. It is just such an obvious product to use from a known, renowned supplier of Civil Engineering and Drainage solutions."



**Balfour Beatty/United Utilities**

## Pumping Facility, Sheffield

"All this time I have been building brick chambers, taking days. This two metre 600mmx600mm chamber took 15 minutes to build once the excavation was complete."



**H&S Construction**

## Jamaica Airport

"We had already purchased a specified size of chamber for water type works, but wanted to use them instead of brick chambers for lights around Jamaica airport. PDS designed a test which proved 100% water tightness saving the contract time and ultimately costs."



**Roadgrip - Specialist Airport Contractors**



# Features & Benefits

## Strong & Robust



Envirochamber **does not break**. The units are made from a recycled material that is more durable than concrete and tested to **D400kN** unsupported. There is no danger of breakage from the logistic and stocking process.

## Speed of reinstatement



The Envirochamber can be installed, reinstated and immediately trafficked. This saves both time, and money on expensive traffic management.

## Lightweight



The units are considerably **lighter** than the concrete equivalents. They can be installed manually and in the majority of instances with one-man manual lift.

## Durable



Envirochamber is **resistant** to all forms of effluents including road salts, petrol and diesel. Recycled plastic takes up to **1000 years to degrade**.

## Cost Savings



The product is quicker and easier to install with the major benefit that roads can be re-opened much faster, so **reducing costs**.

## Guarantee



PDS are so confident of Envirochamber's ability to provide a strong, robust and lasting access solution that we offer a **guarantee against breakage** - before, during and after installation.

## One-Piece Design



The one-piece tooling offers a monolithic unit, without screws or joints that could easily break. This ensures that any **load is distributed evenly**.

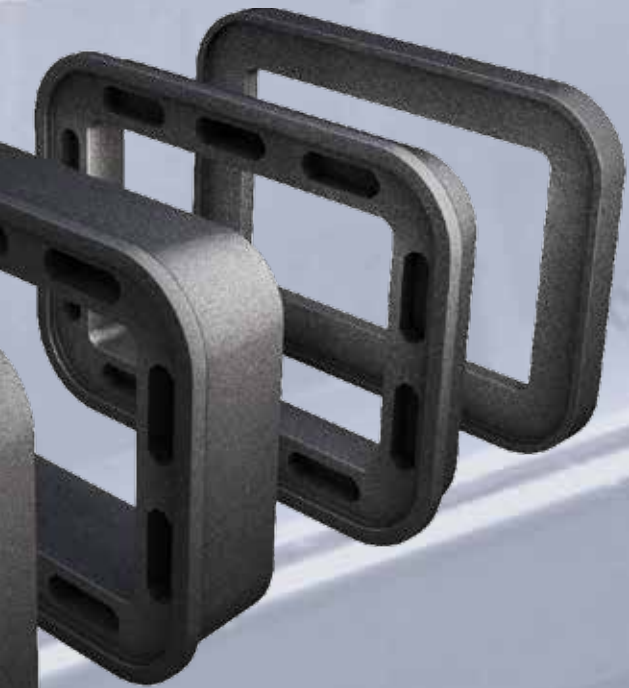
**GUARANTEE**



## A Chamber Like No Other



PDS have the largest range of small chambers, and are currently adding larger chambers to allow supply to other industries. The product is strong and robust reducing installation time significantly. We are also able to offer ancillary products that add to the usability of the chamber. **The chamber has been designed for all situations.**



## Full Product Range



- Sizes currently start as small as **150mm x 150mm x 75mm** high stop tap units up to the **900mm x 600mm x 100mm** deep access chambers
- A range of marker posts manufactured from the same robust material
- Offset, centre and square hole bases available
- A range of **430mm x 280mm** hydrant chamber covers in composite available
- Extended range of composite covers for other sizes also available

## Proposed Future Sizes



- 1200mm x 750mm** (75mm/100mm deep)
- 1200mm x 900mm** (75mm/100mm deep)

## Accredited, Certified & Approved



- Envirochamber is tested to **D400kn - EN124** unsupported
- Chambers comply to **BS5834** part 2 2011 (Surface boxes, guards and underground chambers for the purposes of utilities)
- Covers comply to **BS 5834 - Part 2 2011** and to **ENBS 14598 - 3 - 3 2005** (material selection)
- **HA 1 04/11** has also been taken into account during the design and testing of the products
- Achilles approval
- PDS has **ISO 9001** certification
- PDS has **ISO 14001** environmental management systems
- Approval from most major water authorities
- Number 1 supplier to the water authorities in the UK

## Better For The Environment.



Unlike existing systems - which are brittle, heavy and difficult to recycle - Envirochamber can help to reduce the carbon footprint of your organisation.

Envirochamber is manufactured from a recycled plastic composite that would otherwise be destined for landfill in the UK and overseas.

The units are robust and **do not break** during or after installation. At the end of their lifetime they can even be recycled into new units.

All this reduces the amount of waste sent to landfill in the UK or overseas and helps to meet the increasing **recycling demands** of the industry.



## WATERTIGHT

Some contracts ask for a watertight chamber, especially if they contain electrical systems. This is easily achieved with Envirochamber. A recent test proves that the product can be 100% watertight against hydrostatic pressure.



## INLETS/OUTLETS

Inlets and outlets can either be core-drilled into the units on site, or at the factory to order to suit all pipe types and diameters, but we also manufacture some units with preformed holes.



## Standard Chamber Section

The chamber sections are as per the details in the table below and offer a standard sized one-piece chamber section commonly used throughout the water utility market. We have six section depths being 25mm, 50mm, 75mm, 100mm, 150mm and 300mm. They have been designed to stack/interlock easily and safely on top of one another. The outer shape of the sections taper from the base to the top to assist in the seating of the completed chamber.

Product code	C/O Length	C/O Width	Depth	Weight	Number per pallet
ENCH25	430mm	280mm	25mm	1.7kg	100
ENCH50	430mm	280mm	50mm	3.5kg	100
ENCH75	430mm	280mm	75mm	5.2kg	100
ENCH100	430mm	280mm	100mm	7kg	80
ENCH150	430mm	280mm	150mm	10kg	50
ENCH300	430mm	280mm	300mm	12kg	30



## 430 x 280 Base Sections

The utility market has a requirement for base sections in chambers. These may be useful in other market sectors. There are three types; an offset circular hole, a central circular hole and a new universal type with rectangular hole to fit over existing pipe work or valves - this is quickly becoming our most popular unit.

The offset hole base and the central hole base are manufactured so they can be snapped into two parts on site to allow fitting around any exiting pipework.

Product code	C/O Length	C/O Width	Depth	Weight	Number per pallet
ENCH5 - Central hole	580mm	430mm	40mm	9.5kg	100
ENCH6 - Off set hole	580mm	430mm	40mm	9.5kg	100
ENCH7 - Rectangular hole	580mm	430mm	40mm	9.5kg	100



## STOCKING/LOGISTICS

Wastage on concrete units is in excess of 20% - 30% from stocking and logistics alone. Envirochamber will not break - and if they do, we replace free of charge!

**GUARANTEE**

## DOES NOT FAIL/CRACK POST INSTALLATION

Brick and concrete units are reliant on the structural surround. This has a human element that has potential for poor quality. Envirochamber has an inherent strength making it failure proof.



## SV Chambers

This chamber type was initially introduced for Sluice and Stop Valves. There are three opening sizes 150mm x 150mm, 180mm x 180mm, 230mm x 230mm - All available 75mm, 100mm and 150mm deep.

Units interlock together and depths can be integrated to meet the correct depth and bases are available for all sizes.

Product code	C/O Length	C/O Width	Depth	Weight	Number per pallet
ENCHSV75	230mm	230mm	75mm	4.2kg	144
ENCHSV10	230mm	230mm	100mm	5.2kg	108
ENCHSV15	230mm	230mm	150mm	7.5kg	81
SV151575	150mm	150mm	75mm	4.0kg	144
SV151510	150mm	150mm	100mm	4.8kg	144
SV151515	150mm	150mm </td <td>150mm</td> <td>6.0kg</td> <td>108</td>	150mm	6.0kg	108
SV181875	180mm	180mm	75mm	4.0kg	192
SV181810	180mm	180mm	100mm	4.8kg	144
SV181815	180mm	180mm	150mm	6.0kg	108



## Sv Chamber Base Sections

Base sections are available for the SV Chamber Base sections. A standard 150mm x 150mm, 180mm x 180mm and 230mm x 230mm

Product code	C/O Length	C/O Width	Depth	Weight	Number per pallet
ENCHSVB	480mm	480mm	45mm	6.0kg	144
SV1515B Universal Base	400mm	400mm	50mm	5.0kg	200



## RAISING PIECE AND CONCRETE ADAPTER

PDS also have a 25mm deep raising piece which fits on top of an assembled chamber to raise the height. It doubles as an adapter to convert a concrete chamber to plastic on an existing manhole.



## MATERIAL- GREEN

The Envirochamber manhole sections are made entirely from recycled materials destined for landfill sites within the UK or overseas. This has helped to reduce the carbon footprint of not only PDS but also the producer of the waste plastic, transport companies and you, the final user of Envirochambers.



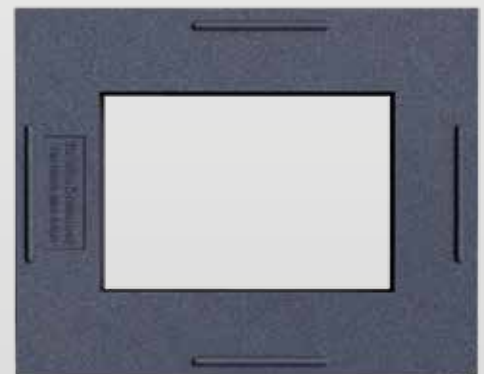
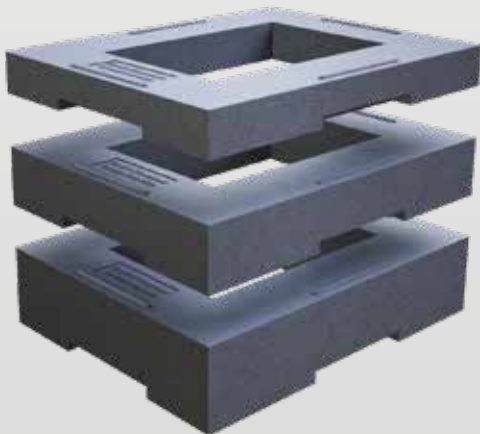
## Large Chamber Section

The Envirochamber product range has been added to by our **Large chamber sections**. These start at 450mm x 450mm and currently up to 1200mm x 900mm, all with a choice of depths.

Sections interlock, providing a firm and secure chamber build. The units will all take a D400KN unsupported load.

The benefits over brick and concrete chambers are numerous, including speed of installation and the time to traffic over the reinstatement.

We are constantly developing the range of chamber products that has led to the 1200mm x 900mm. Please contact us if you are unable to see the size you are looking for.



Product code	C/O Length	C/O Width	Depth	Weight	Number per pallet
ENCHL454510	450mm	450mm	100mm	10kg	30
ENCHL604575	600mm	450mm	75mm	16kg	32
ENCHL604510	600mm	450mm	100mm	20kg	26
ENCHL604515	600mm	450mm	150mm	15kg	20
ENCHL606010	600mm	600mm	100mm	18kg	13
ENCHL906075	900mm	600mm	75mm	20kg	16
ENCHL906010	900mm	600mm	100mm	25kg	13

Sizes up to **1200x900** also available



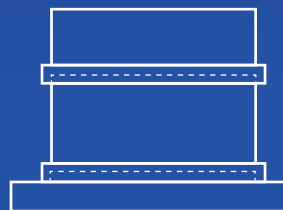
## ACHILLES APPROVAL

Pipeline & Drainage Systems are now fully registered as a supplier on the Utilities Vendor Database for category 3.15.20 Surface Boxes & Chambers.



## LOCATING RIBS

Envirochambers are designed to stack/interlock easily and safely on top of one another. The outer shape of the sections taper from the base to the top to assist in the seating of the completed chamber.



## Ancillaries

PDS Ltd have always consulted with clients and end users when considering product development. On the Envirochamber range this has led to a number of ancillary products.

The 25mm deep **Raising piece** has a dual purpose. It can raise our 430mm x 280mm chamber by 25mm and also provides an interlock between an existing concrete chamber and the Envirochamber. This allows a concrete unit to be left in place whilst increasing the depth with a more durable product.

We also have a range of **Bases** which incorporate a shaft pipe and Top Hat to allow simple access to any valve or stop tap and also provide a **Top Plate** for use with Kettler Spindles.



## Marker Post

Our posts are made from grey recycled plastic to simulate the look of concrete but without the inherent problems associated with products made from this conventional material.

The posts weigh approx 7kg as opposed to 20 to 25kg and therefore offer Health and Safety advantages.

Traditional concrete marker posts have breakage rates over 30% during transit and prior to installation. Vandals also seem to enjoy snapping concrete posts! The Envirochamber Marker post will not break prior to installation (PDS offer free replacements for ANY breakages) and vandals will need to be very determined to cause any damage.



Product code	C/O Length	Weight	Number per pallet
ENCHMP	990mm	7.0kg	80
ENCHP1230	1230mm	8.0kg	80
ENCHMPF	Field	6.0kg	80

# Composite Covers

To compliment the Envirochamber range, PDS were asked to develop a range of composite hydrant covers to replace stolen or damaged units. The lids are dropped into existing frames. We have now also added hydrant covers complete with frame for new infrastructure works.

These are all manufactured to **BS5834 grade A** and **EN124 D400KN** loading. Frames are designed to sit on top of the chambers and hydrant covers are specific to the **430mm x 280mm** hydrant chambers badged accordingly **SV, FH, WO, METER**. Other badging is available.

The hydrant covers have been such a success that we have now added other composite covers to the range. A **150mm x 150mm** Heavy Duty surface box, a **450mm x 450mm D400**, a **600mm x 600mm**, a **900mm x 600mm B125**, **600mm x 450mm B125**, and a **600mm x 600mm B125**.

*Once again, we are constantly developing the range of covers. Please call our office for an update on available sizes.*

## Selection Of Composite Products



## Hydrant Covers



## Cover For Waste Water



Can be badged with **FH - WO - SV - METER - WATER** and specials to customers requirements.

Can also be supplied in various colours such as **YELLOW to RAL 2013 Traffic Yellow** for fire hydrants, with or without locks. A **metal plate** can be fitted for detection by the Fire Brigades if required.

Product	C/O Length	C/O Weight	Loading
Surface Box	150mm	150mm	Heavy duty
Hydrant Cover only	430mm	280mm	D400KN
Hydrant Cover and Frame	430mm	280mm	D400KN
Cover and frame	450mm	450mm	D400KN
Cover and frame	600mm	600mm	B125KN
Cover and frame	600mm	600mm	D400KN
Cover and frame	900mm	600mm	B125KN

# Installation Guides & Benefits

**Step 1** - Ensure that the area excavated is adequate to allow for the chamber's width and height and that there is a sufficient area for the backfill, in principle allowing 150mm for the backfill materials.



**Step 4** - Backfill material can be well compacted "as dug" material. Envirochambers have been tested free standing without concrete surround to Class **D400 BSEN124**.



**Step 2** - The sub base must be well compacted to depth of 100mm and either a purpose made or an in situ concrete base be formed making allowance for the incoming hydrant, sluice vavles etc.



**Step 5** - It is usual to use a concrete haunching to cap off at least the last 100mm in height and also to enclose the frame and cover in C40 dry mix concrete if in a roadway.



**Step 3** - Place units on top of each other with the deepest units at the bottom and shallowest ones at the top.



**Step 6** - Envirochambers can be trafficked as soon as they are back filled and topped off with surfacing. No allowance for curing is required therefore reducing the timescales of expensive traffic management.



# Certificates



PDS Ltd are the largest supplier of combined kerb drainage in Europe and have always been proud of our quality assurance, accreditation and certification that provides you with all the relevant assurances required for the Envirochamber range



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PDS operates a policy of continuous development and whilst the enclosed specification is correct at time of publication, we reserve the right to change it without notice.

Design, Manufacture and Distribution of  
Specialist Bridge and Kerb Drainage Products.