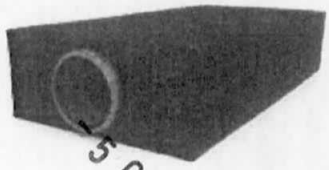
Permavoid Rainwater Diffuser Unit

Data Sheet

PRODUCT INFORMATION P1 ISSUE 1 - JAN 2016

Run-off from building roofs is collected into downpipes and flows into a back inlet gully incorporating an internal filter or catchpit inspection chambers. The back inlet gully or chamber discharges the filtered stormwater into the permeable sub-base via Permavoid Rainwater Diffuser Unit encapsulated in a 2mm mesh fabric. The run-off will then diffuse out of the Permavoid Rainwater Diffuser Unit and into the modified granular sub-base layer. The Permavoid unit is a 150mm deep modular interlocking plastic unit storage system designed for use as a combined drainage component and sub-base replacement system, ideal for shallow infiltration/attenuation.



5 OCT 2017

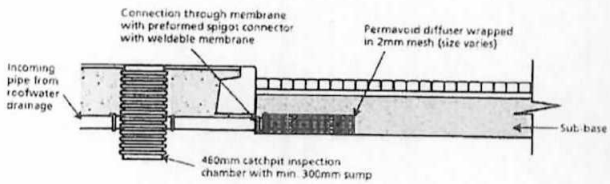
Permavoid Rainwater Diffuser Unit - Configuration Options

Length \ Width	354mm	708mm	1062mm	1416mm	2124mm
708mm	✓	✓	✓	✓	✓
1062mm	✓	✓	✗	✓	✓
1416mm	✓	✓	✓	✓	✓
2124mm	✓	✓	✓	✓	✓

Depths available are either 150mm or 300mm.
Connections available are either Ø110mm or Ø160mm.

Catchpit: 460mm diameter catchpit with 160mm inlet - PSMT 160
460mm diameter catchpit with 110mm inlet - PSMT 110

Typical Layout - Rainwater downpipe drainage into sub-base reservoir



ELEMENT	VALUE
PHYSICAL PROPERTIES	
Weight per unit	3kg
Length	708mm
Width	354mm
Depth	150mm
SHORT TERM COMPRESSIVE STRENGTH	
Vertical	715kN/m²
Lateral	156kN/m²
SHORT TERM DEFLECTION	
Vertical	1mm per 126kN/m²
Lateral	1mm per 15kN/m²
TENSILE STRENGTH	
Of a single joint	42.4kN/m²
Of a single joint at (1% secant modulus)	18.8kN/m²
Bending resistance of unit	0.71kN/m
Bending resistance of single joint	0.16kN/m
Volumetric void ratio	95%
Average effective perforated surface area	52%
OTHER PROPERTIES	
Intrinsic permeability (k)	Minimum 1.0×10^{-5}
Ancillary	Permavoid Permatie Permavoid Shear Connector
Material	Polypropylene (PP)

HYDRAULIC PERFORMANCE						
3 units wide, 1 unit deep (1.06m x 0.15m)						
FREE DISCHARGE						
Gradient (%)	0	1	2	3	4	5
Flow rate (l/m/s)	8	13	15	17	19	21

Technical Support

Detailed guidance and assistance is available.
For further information, please contact our Technical Team on **+44 (0) 1509 615 100** or email **civils@polypipe.com**

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Permeable Paving Design Guide

Marshalls

Creating Better Spaces

RIDGISTORMSeparate Catchpits

Data Sheet

PRODUCT INFORMATION P1

RIDGISTORMSeparate Catchpits are designed to separate silt and other particles from stormwater, helping to protect the downstream drainage system and local environment. They can be integrated into our range of pipe systems, such as Ridgidrain and Ridgistorm-XL to offer a fully integrated drainage system.





Applications

RIDGISTORMSeparate Catchpits are pre-fabricated for use in a range of stormwater systems requiring silt and debris seperation and retention.

Key Features and Benefits

- Provides easy access for silt collection
- Network Rail Parts and Drawing System (PADs) approved for use in CESS Areas
- Separates silt and debris from the downstream drainage system
- Eliminates wastage associated with in-situ construction
- Multiple inlet and outlet options, supplied with integral sockets as standard allowing quick and seamless connection to pipeline
- Depths can be tailored to suit project requirements
- Optional step rungs to BS EN 13101 and ladders to BS EN 14396
- Integral lifting points available on request to improve Health and Safety of handling and installation
- Stub connections and rocker pipes are available

Other fabrications in our RIDGISTORMSeparate range:

- Silt Traps
- Filter Chambers

Performance

RIDGISTORMSeparate Catchpits are fabricated from Ridgistorm-XL pipework, which is manufactured to meet the material requirements of BS EN 13476:2007 (Part 1-3).

RIDGISTORMSEPARATE CATCHPITS	
PHYSICAL PROPERTIES	
Diameter	450-3000mm
Depth	To suit requirements
Sump depth	To suit (min. 50mm)
Material	HDPE
Colour	Black with blue Interior
Chemical resistance	HDPE is naturally resistant to most chemicals associated with stormwater drainage systems
Inlets/outlets	100-3000mm

Our Ridgistorm-XL Fabrications range

All of our Ridgistorm-XL fabrications are tailor-made, fully-welded, watertight structured wall chambers to suit project-specific requirements. Health and Safety benefits become apparent during handling and installation, due to our fabrications' strong but light in weight nature. In addition, off-site construction ensures uncompromised, high quality products being delivered to site ready-to-install, reducing installation time and costs.

Network Rail

WRc Approved

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