

# PERMAVOID COMPONENTS

Specifications and Applications



*Version 4*

*Permavoid Ltd*

*Due to continuous product development, products, materials and specifications may vary from this brochure. Interested parties may visit the Permavoid website for any product enquiries. Copyright © Permavoid Limited. All rights reserved.*

## What is Permavoid?

Permavoid is a geocellular water management system designed to provide stormwater retention, attenuation or infiltration in shallow applications. It can be used as part of an engineered or soft SuDS solution.

The system consists of high-strength modular cells and components for dealing with silt and oil separation and shallow flow controls.

Permavoid's integrated system meets the demands of current legislation and guidance for source control and surface water treatment.

## Applications

The Permavoid system is designed to be used in place of traditional aggregate sub-base for shallow applications.

- Residential areas
- Industrial estates
- Car parks
- Sports pitches
- Blue / Green Roofs
- Basements
- Pedestrian areas
- Podium decks
- Rainwater harvesting
- Equestrian

This brochure contains detailed information for the full range of Permavoid ancillary components recommended for use within the above applications.

Product Code	Description	Page
PVOD01101	Podium Deck Gully; 85mm/315mm	3
PVOD01102	Podium Deck Gully; 150mm/315mm	5
PVOD01201	Podium Deck Gully to suit 85mm Permavoid	7
PVOD01202	Podium Deck Gully to suit 150mm Permavoid	9
PVOD01301	Podium Deck Roof Outlet Access Gully to suit 85mm Permavoid	11
PVOD01302	Podium Deck Roof Outlet Access Gully to suit 150mm Permavoid	13
PVOD01303	Podium Deck Roof Outlet Access Gully to suit 300mm Permavoid	15
PVOD01401	Podium Deck RWP Chamber 85mm/110mm	17
PVOD01402	Podium Deck RWP Chamber 150mm/110mm	19
PVOD01403	Podium Deck RWP Chamber 150mm/160mm	21
PVOD02101	Saddle connection 110/150; 110mm Ø Spigot	23
PVOD02102	Saddle connection 110/170; 110mm Ø Spigot	25
PVOD02201	Saddle connection 160/150; 160mm Ø Spigot	27
PVOD02202	Saddle connection 160/170; 160mm Ø Spigot	29
PVOD03101	110mm Ø Invert Membrane Sealed Tank Adaptor	31
PVOD03102	160mm Ø Invert Membrane Sealed Tank Adaptor	33
PVOD03201	110mm Ø Flat Membrane Sealed Tank Adaptor	35
PVOD03202	160mm Ø Flat Membrane Sealed Tank Adaptor	37
PVOD03301	110mm Ø Flat Mechanical Sealed Tank Adaptor	39
PVOD03302	160mm Ø Flat Mechanical Sealed Tank Adaptor	41
PVOD04101	600mm Ø Overflow Chamber 160mm Inlet & Outlet	43
PVOD04201	600mm Ø Monitoring Chamber 160mm Inlet	45
PVOD04202	600mm Ø Multi-use / Pump Chamber	49
PVOD04301	600mm Ø Equivalence Chamber 160mm Inlet & Outlet	51
PVOD04302	900mm Ø Equivalence Chamber 160mm Inlet & Outlet	53
PVOD04401	600mm Ø Silt Pit Chamber 160mm Spigots	55
PVOD05101	Diffuser Unit 710x710x150; 110mm Ø Socket	59
PVOD06101	Pipe Connection Kit	63

## Podium Deck Gully; 85mm/315mm

PVOD01101

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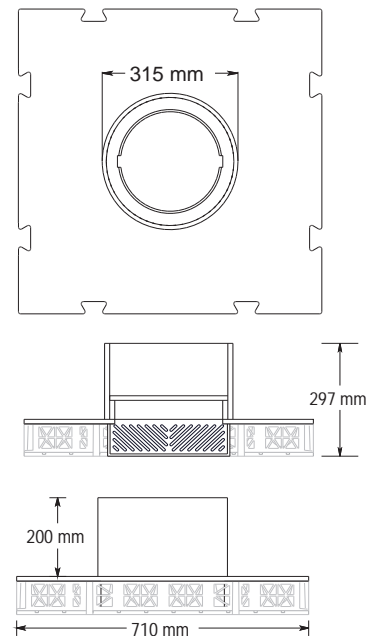
### Description

The Podium Deck Gully; 85mm/315mm has been specifically designed for use in shallow Permavoid® podium deck construction, where a 315mm  $\varnothing$  connection is required for the gully cover and frame. The chamber is set within 85mm deep Permavoid, and has a circular 315mm  $\varnothing$  riser. Rainwater is collected and dispersed into the surrounding Permavoid storage system. The gully has an integral silt basket and is easily accessible for clearing of silt and debris during routine maintenance. Gully grating and frame not included.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	732 x 732 x 319 (LxWxD)	mm
Packaging unit weight	11.8	kg
Number of units per pallet	8	nr
Pallet dimensions	1200 x 1200 x 1614 (LxWxH)	mm
Pallet weight	119.4	kg



### Specification

Element	Value	Unit
Overall length	710	mm
Overall width	710	mm
Overall depth	297	mm
Riser outside diameter	315	mm
Riser length	200	mm
Unit weight	11.8	kg
Material	HDPE / PP	

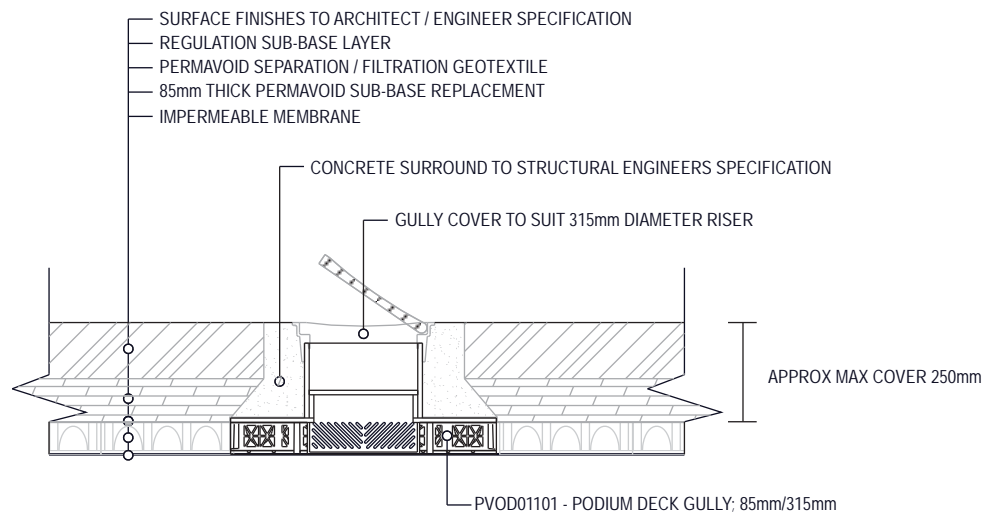
Easy access for routine maintenance

Effective water dispersal

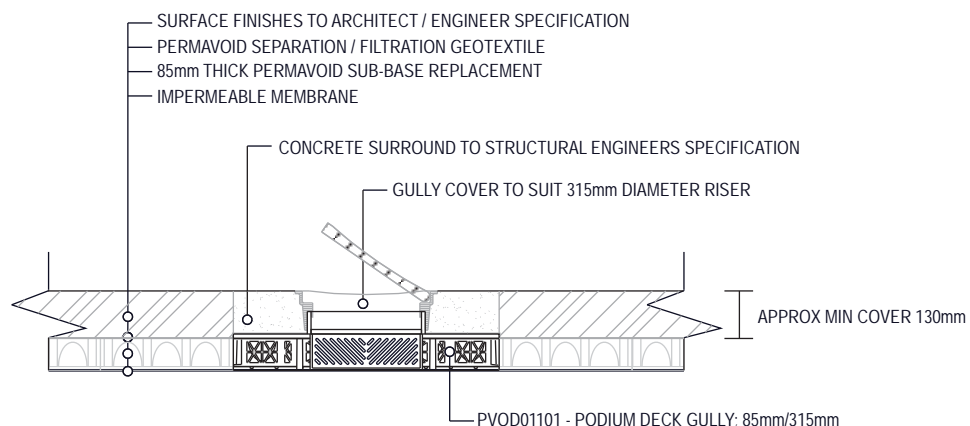
Integrates with surrounding Permavoid

## PVOD01101 - PODIUM DECK GULLY; 85mm/315mm

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 250mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 130mm)



## Podium Deck Gully; 150mm/315mm

PVOD01102

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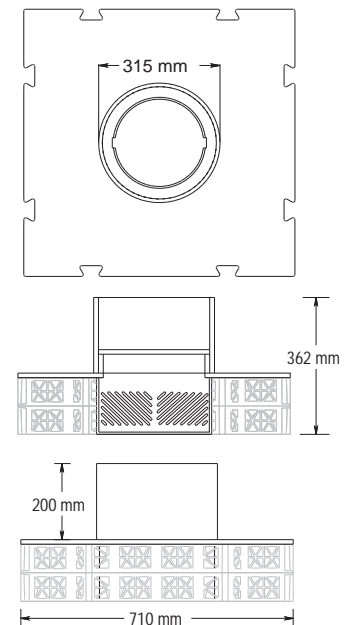
### Description

The Podium Deck Gully; 150mm/315mm has been specifically designed for use in shallow Permavoid® podium deck construction, where a 315mm  $\varnothing$  connection is required for the gully cover and frame. The chamber is set within 150mm deep Permavoid, and has a 315mm  $\varnothing$  riser. Rainwater is collected and dispersed into the surrounding Permavoid storage system. The gully has an integral silt basket and is easily accessible for clearing of silt and debris during routine maintenance. Gully grating and frame not included.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	732 x 732 x 384 (LxWxD)	mm
Packaging unit weight	12.6	kg
Number of units per pallet	8	nr
Pallet dimensions	1200 x 1200 x 1600 (LxWxH)	mm
Pallet weight	125.8	kg



### Specification

Element	Value	Unit
Overall length	710	mm
Overall width	710	mm
Overall depth	362	mm
Riser outside diameter	315	mm
Riser length	200	mm
Unit weight	12.5	kg
Material	HDPE / PP	

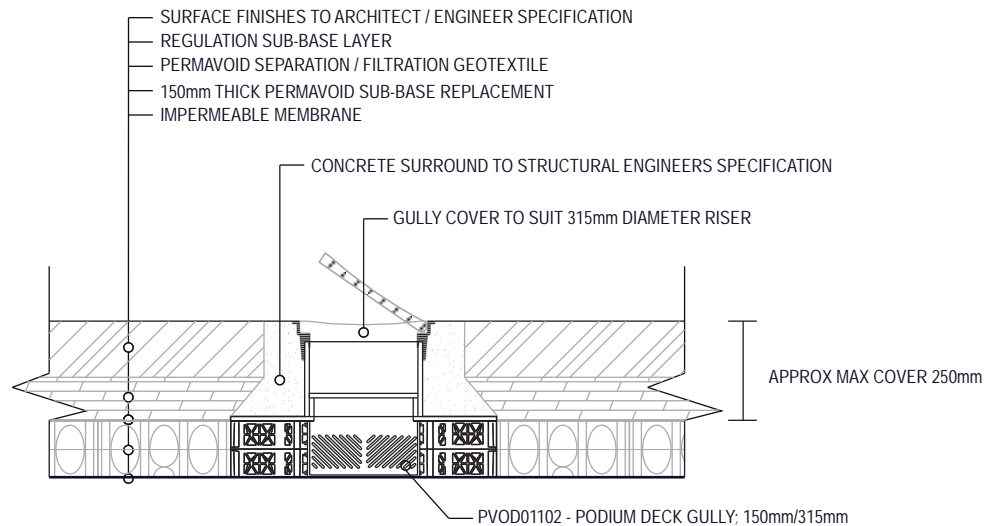
Easy access for routine maintenance

Effective water dispersal

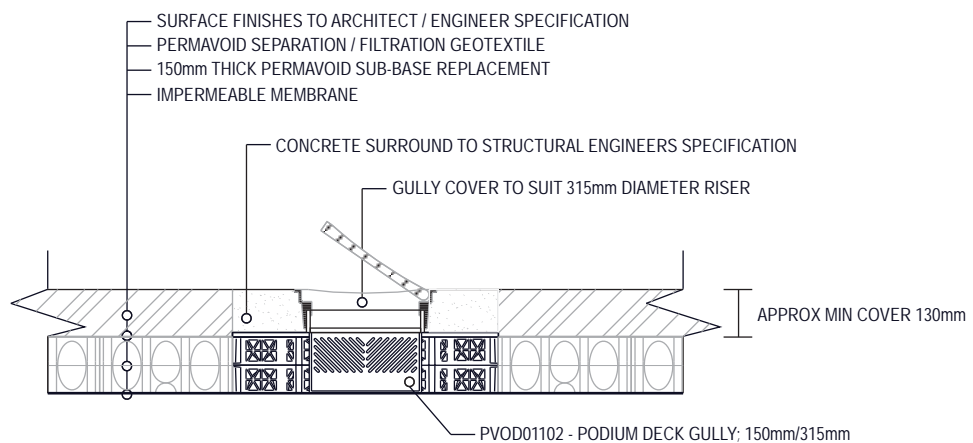
Integrates with surrounding Permavoid

## PVOD01102 - PODIUM DECK GULLY; 150mm/315mm

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 250mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 130mm)



## Podium Deck Gully to suit 85mm Permavoid

PVOD01201

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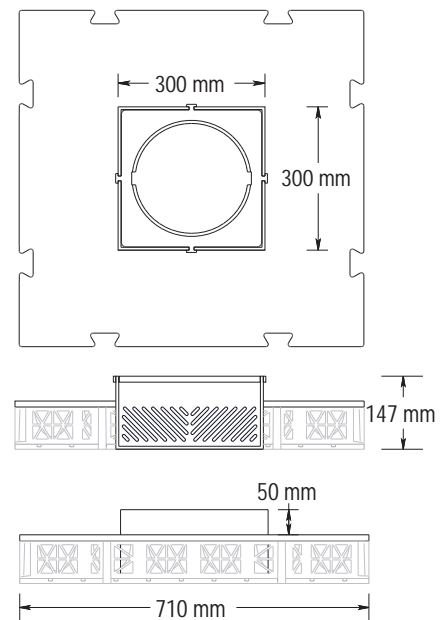
### Description

The Podium Deck Gully to suit 85mm Permavoid has been specifically designed for use in shallow Permavoid® podium deck construction. The chamber is set within 85mm deep Permavoid allowing easy connection the surrounding Permavoid using propriety Permaties. Rainwater is collected via the grating, filtered through the perforated walls and dispersed into the surrounding Permavoid storage system. The gully has an integral silt basket and is easily accessible for clearing of silt and debris during routine maintenance. Gully grating and frame not included.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	732 x 732 x 169 (LxWxD)	mm
Packaging unit weight	11	kg
Number of units per pallet	18	nr
Pallet dimensions	1200 x 1200 x 1620 (LxWxH)	mm
Pallet weight	223	kg



### Specification

Element	Value	Unit
Overall length	710	mm
Overall width	710	mm
Overall depth	147	mm
Sump depth	10	mm
Unit weight	11	kg
Material	HDPE / PP	

Easy access for maintenance

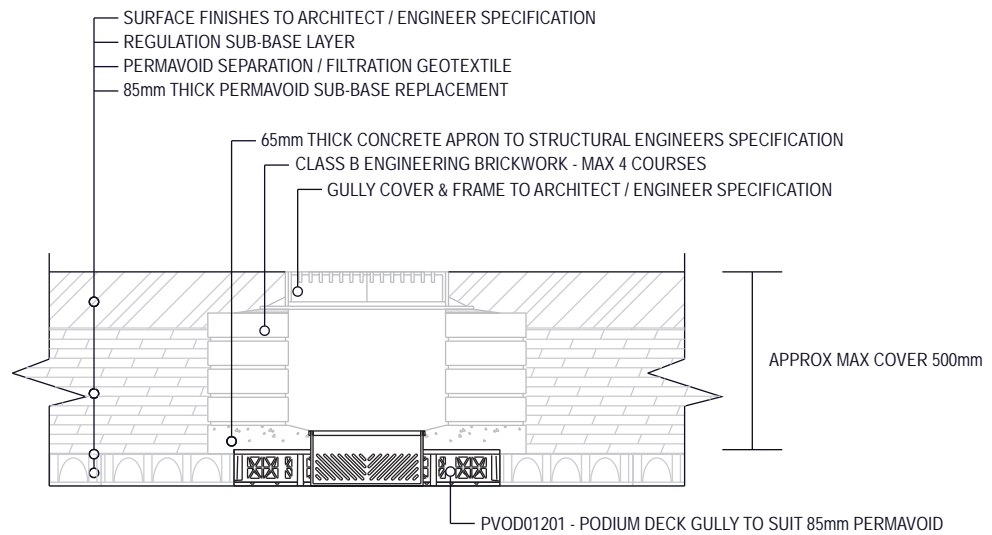
Effective water dispersal

Integrates with surrounding Permavoid

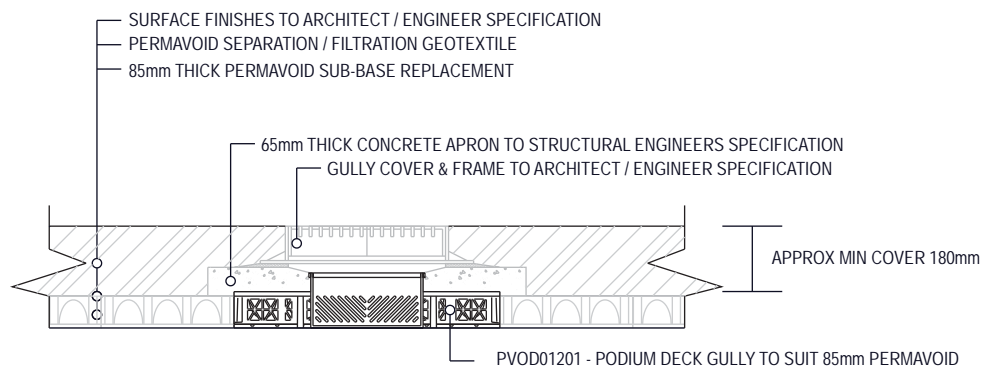


## PVOD01201 - PODIUM DECK GULLY TO SUIT 85mm PERMAVOID

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck Gully to suit 150mm Permavoid

PVOD01202



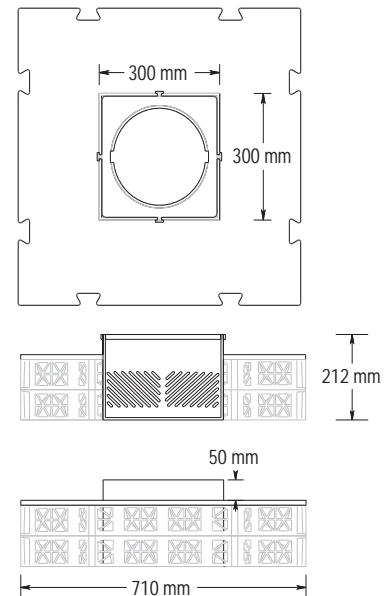
### Description

The Podium Deck Gully to suit 150mm Permavoid® has been specifically designed for use in shallow Permavoid podium deck construction. The chamber is set within 150mm deep Permavoid allowing easy connection the surrounding Permavoid using propriety Permaties. Rainwater is collected via the grating, filtered through the perforated walls and dispersed into the surrounding Permavoid storage system. The gully has an integral silt basket and is easily accessible for clearing of silt and debris during routine maintenance. Gully grating and frame not included.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	732 x 732 x 237 (LxWxD)	mm
Packaging unit weight	12	kg
Number of units per pallet	14	nr
Pallet dimensions	1200 x 1200 x 1614 (LxWxH)	mm
Pallet weight	119.4	kg



### Specification

Element	Value	Unit
Overall length	710	mm
Overall width	710	mm
Overall depth	212	mm
Sump Depth	50	mm
Unit weight	11.8	kg
Material	HDPE / PP	

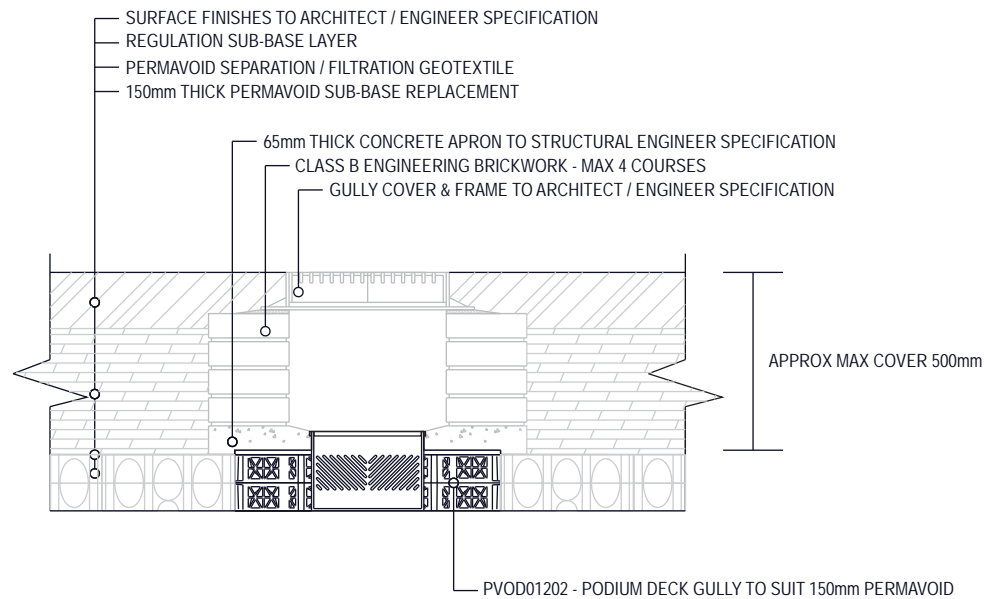
Easy access for maintenance

Effective water dispersal

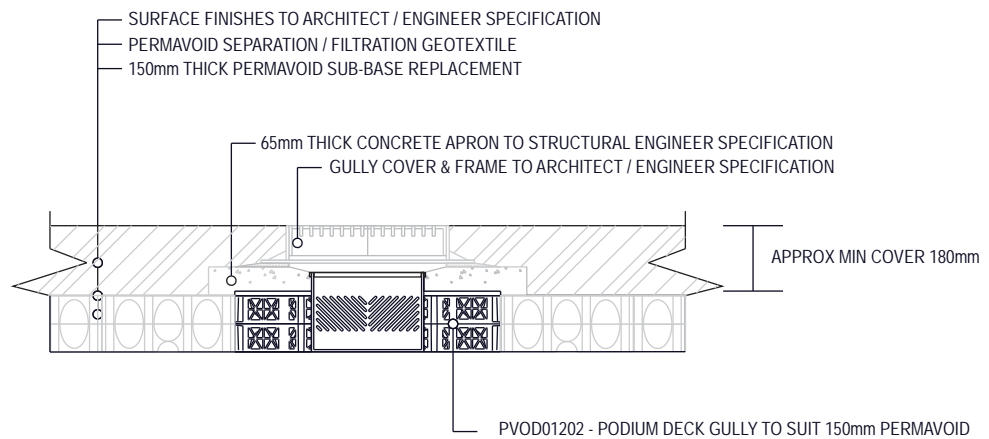
Integrates with surrounding Permavoid

## PVOD01202 - PODIUM DECK GULLY TO SUIT 150mm PERMAVOID

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck Roof Outlet Access Gully to suit 85mm Permavoid

PVOD01301

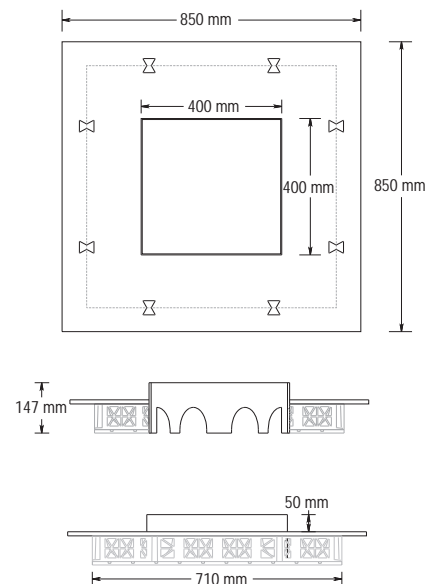
### Description

The Podium Deck Roof Outlet Chamber is engineered to provide access to an existing podium deck outlet, on a 85mm Permavoid sub-base replacement installation. The Podium Deck Roof Outlet Chamber is set within 85mm Permavoid, providing a quick and easy connection to surrounding Permavoid. The chamber allows for easy access to an existing roof outlet for routine maintenance.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	872 x 872 x 169 (LxWxD)	mm
Packaging unit weight	13	kg
Number of units per pallet	7	nr
Pallet dimensions	1200 x 1200 x 1335 (LxWxH)	mm
Pallet weight	116	kg



### Specification

Element	Value	Unit
Overall length	850	mm
Overall width	850	mm
Overall depth	147	mm
Outlet access length	400	mm
Outlet access width	400	mm
Unit weight	13	kg
Material	HDPE / PP	

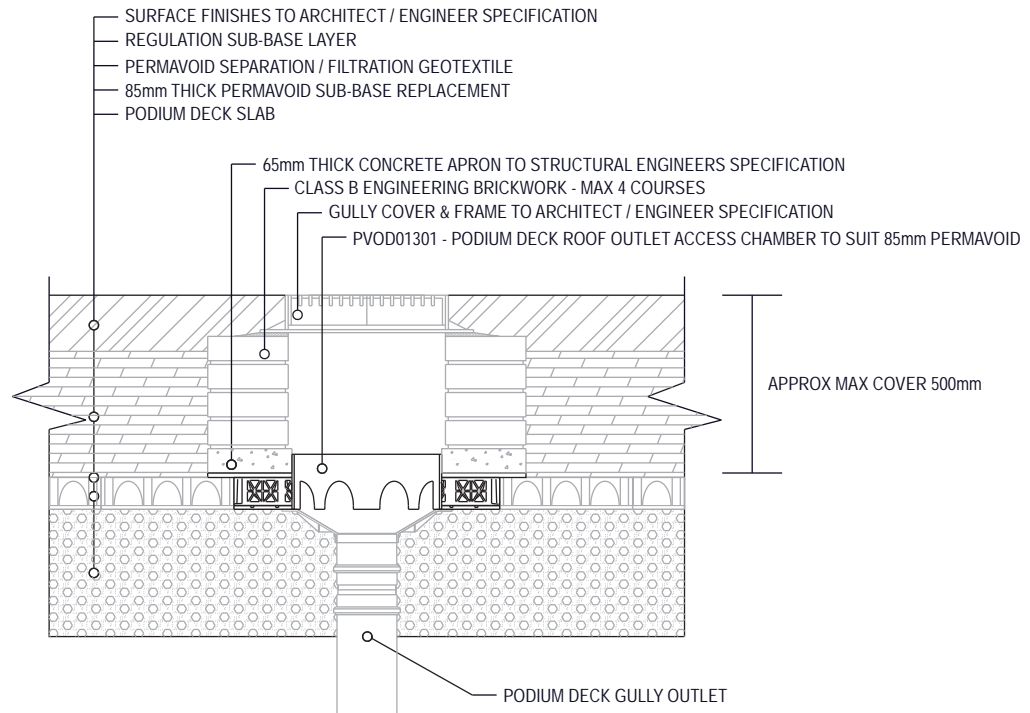
Easy access for maintenance

Effective water dispersal

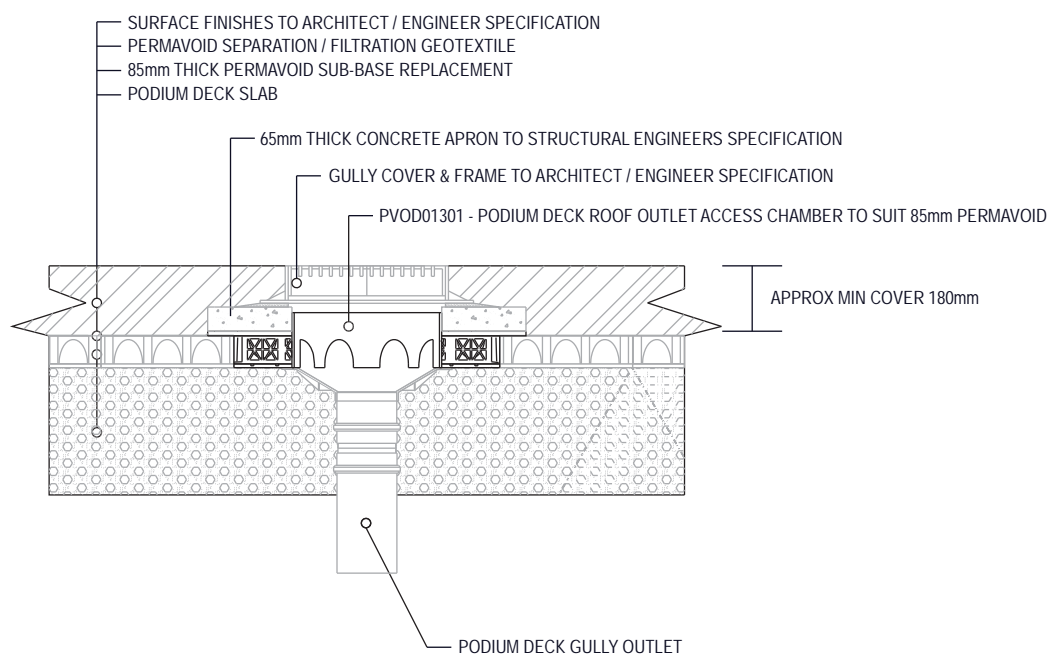
Integrates with surrounding Permavoid

## PVOD01301 - PODIUM DECK ROOF OUTLET ACCESS CHAMBER TO SUIT 85mm PERMAVOID

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck Roof Outlet Access Gully to suit 150mm Permavoid

PVOD01302

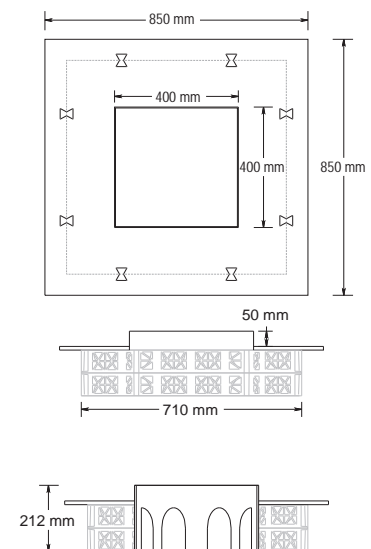
### Description

The Podium Deck Roof Outlet Chamber is engineered to provide access to an existing podium deck outlet, on a 150mm Permavoid sub-base replacement installation. The Podium Deck Roof Outlet Chamber is set within 150mm Permavoid, providing a quick and easy connection to surrounding Permavoid. The chamber allows for easy access to an existing roof outlet for routine maintenance.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	872 x 872 x 234 (LxWxD)	mm
Packaging unit weight	14	kg
Number of units per pallet	5	nr
Pallet dimensions	1200 x 1200 x 1320 (LxWxH)	mm
Pallet weight	95	kg



### Specification

Element	Value	Unit
Overall length	850	mm
Overall width	850	mm
Overall depth	212	mm
Outlet access width	400	mm
Outlet access length	400	mm
Unit weight	14	kg
Material	HDPE / PP	

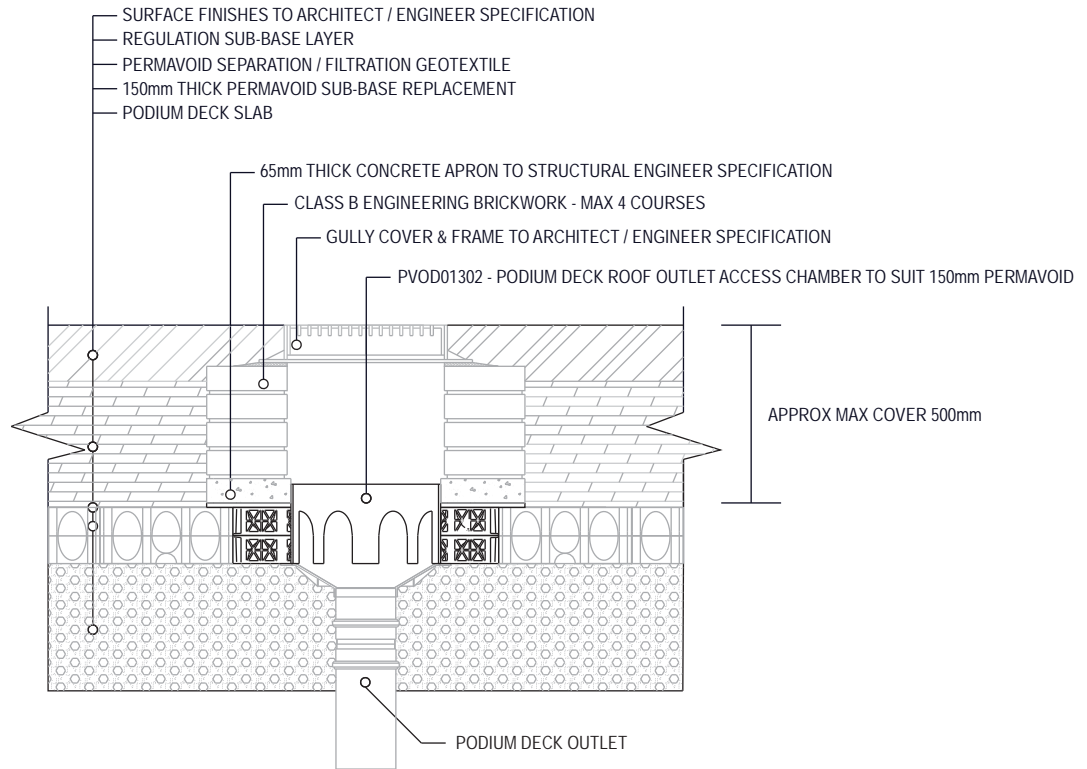
Easy access for maintenance

Effective water dispersal

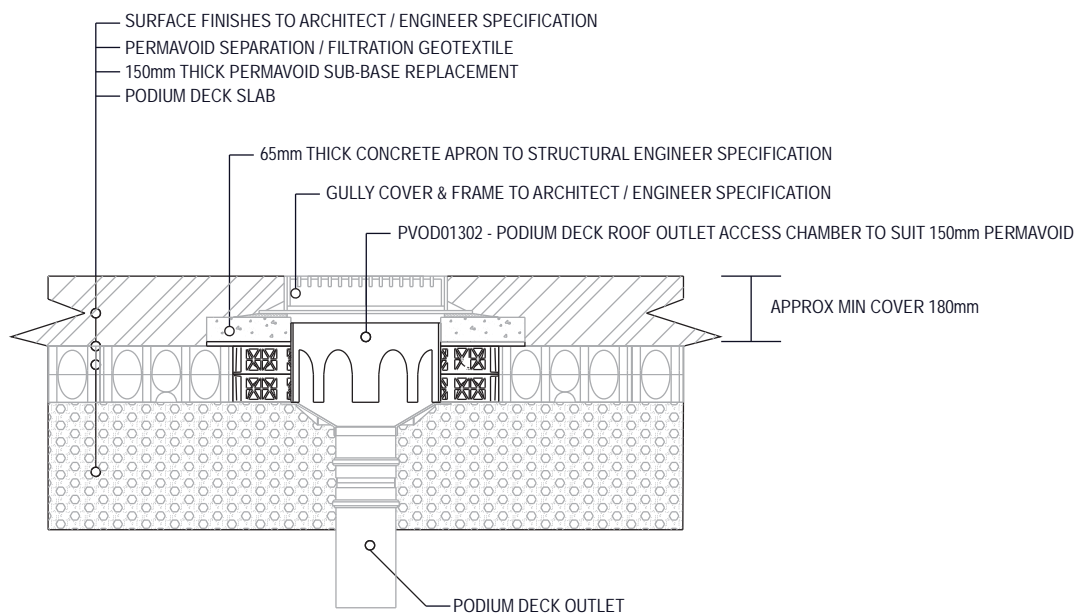
Integrates with surrounding Permavoid

## PVOD01302 - PODIUM DECK ROOF OUTLET ACCESS CHAMBER TO SUIT 150mm PERMAVOID

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck Roof Outlet Access Gully to suit 300mm Permavoid

PVOD01303

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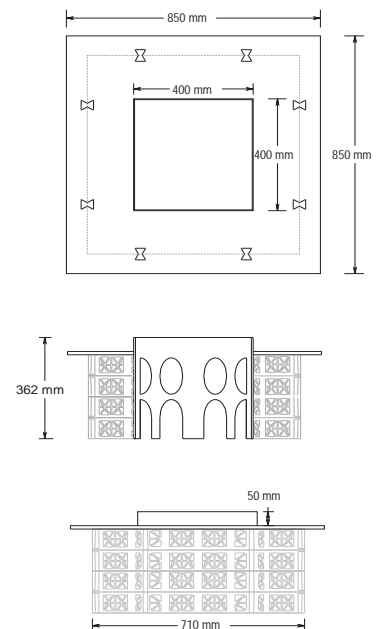
### Description

The Podium Deck Roof Outlet Chamber is engineered to provide access to an existing podium deck outlet, on a 300mm Permavoid subbase replacement installation. The Podium Deck Roof Outlet Chamber is set within two 150mm Permavoid, providing a quick and easy connection to surrounding Permavoid. The chamber allows for easy access to an existing roof outlet for routine maintenance.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	872 x 872 x 384 (LxWxD)	mm
Packaging unit weight	15	kg
Number of units per pallet	4	nr
Pallet dimensions	1200 x 1200 x 1700 (LxWxH)	mm
Pallet weight	85	kg



### Specification

Element	Value	Unit
Overall length	850	mm
Overall width	850	mm
Overall depth	362	mm
Outlet access width	400	mm
Outlet access length	400	mm
Unit weight	15	kg
Material	HDPE / PP	

Easy access for maintenance

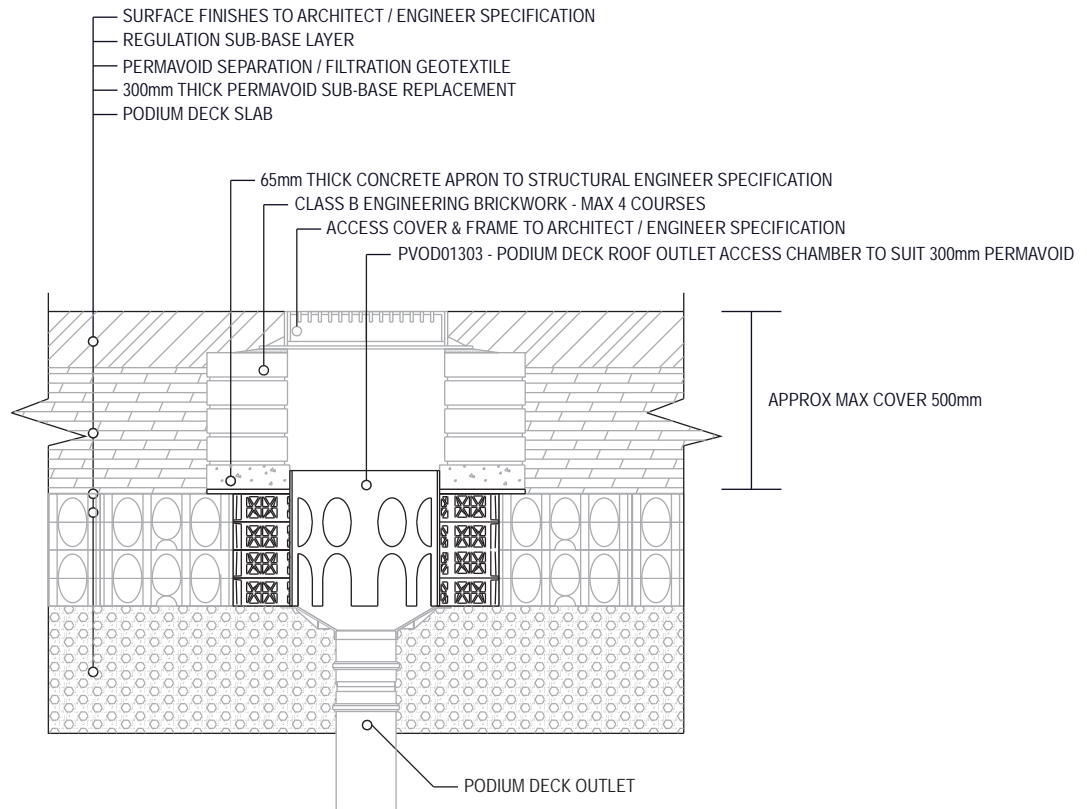
Effective water dispersal

Integrates with surrounding Permavoid

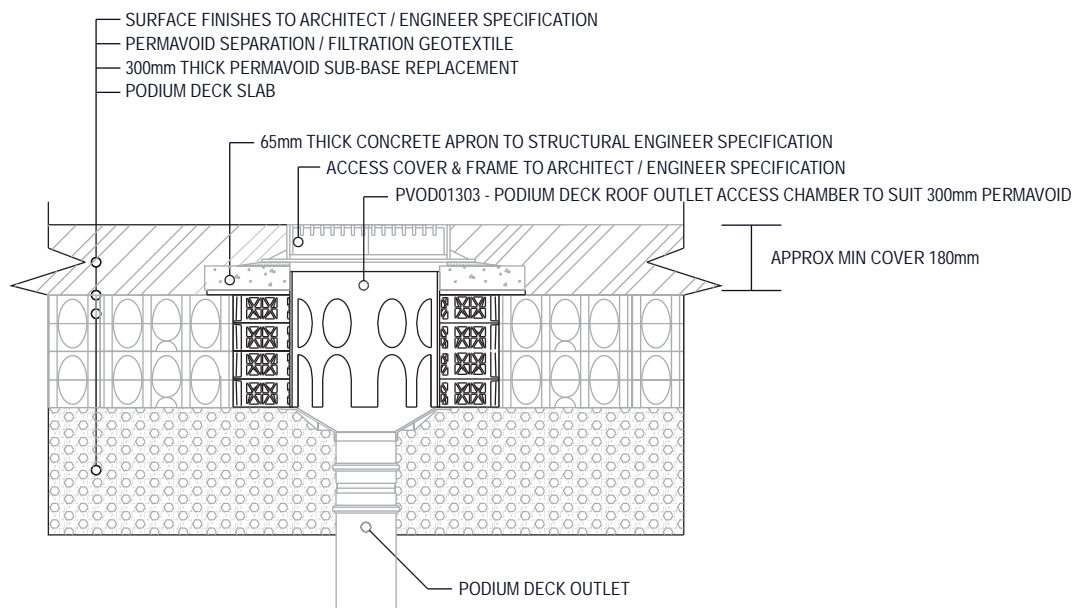


## PVOD01303 - PODIUM DECK ROOF OUTLET ACCESS CHAMBER TO SUIT 300mm PERMAVOID

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck RWP Chamber 85mm/110mm

PVOD01401

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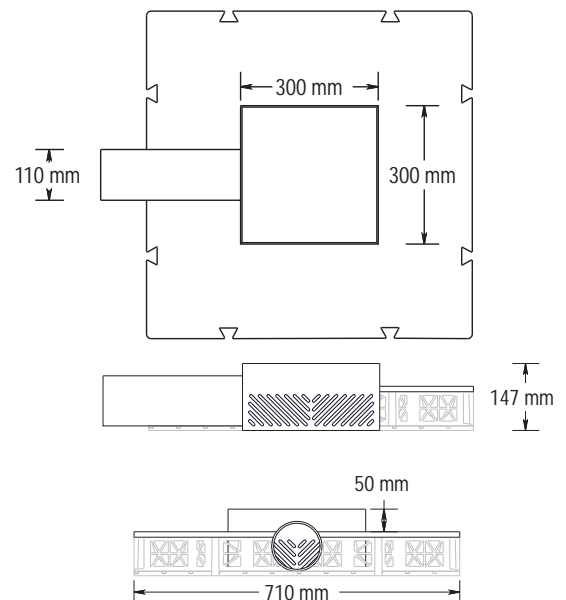
### Description

Designed for use in shallow Permavoid® podium deck constructions, the Podium Deck RWP Chamber 85mm/110mm collects rainwater via the 110mm Ø inlet pipe, filters through the perforated walls and dispersed into the surrounding Permavoid storage system. The Podium Deck RWP chamber is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	832 x 732 x 169 (LxWxD)	mm
Packaging unit weight	11.8	kg
Number of units per pallet	16	nr
Pallet dimensions	1200 x 1200 x 1626 (LxWxH)	mm
Pallet weight	214	kg



### Specification

Element	Value	Unit
Overall length	710	mm
Overall width	810	mm
Overall depth	147	mm
Sump depth	10	mm
Inlet spigot Ø OD	110	mm
Inlet spigot length	90	mm
Maximum flow	8	l/s
Unit weight	11.8	kg
Material	HDPE / PP	

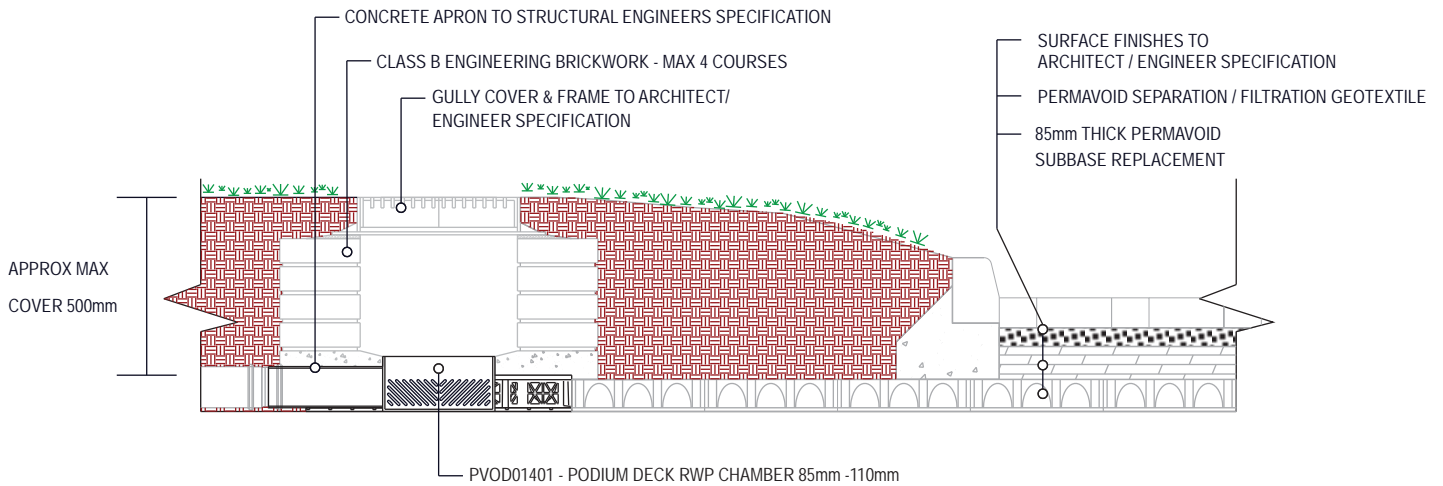
Easy access for routine maintenance

Effective water dispersal

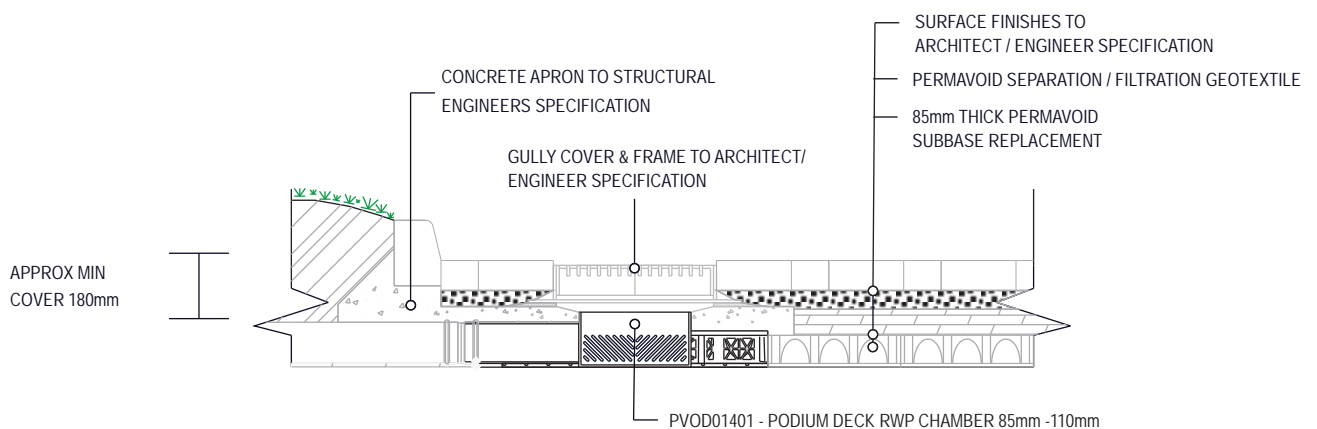
Integrates with surrounding Permavoid

## PVOD01401 - PODIUM DECK RWP CHAMBER 85mm-110mm

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck RWP Chamber 150mm/110mm

PVOD01402

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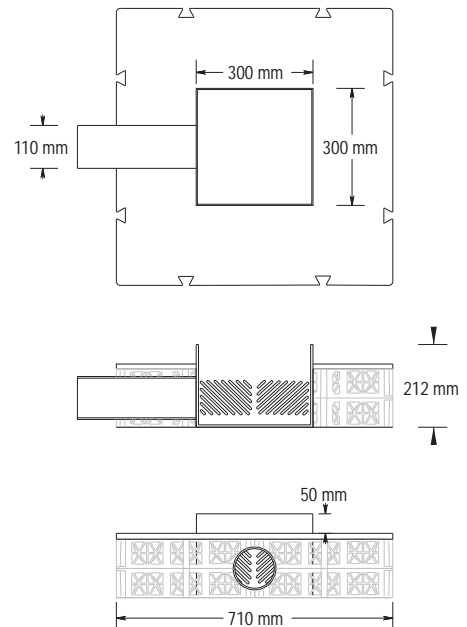
### Description

Designed for use in shallow Permavoid® podium deck constructions, the Podium Deck RWP Chamber 150mm/110mm collects rainwater via the 110mm Ø inlet pipe, filters through the perforated walls and is dispersed into the surrounding Permavoid storage system. The podium deck RWP chamber has an integral 50mm deep sump to effectively trap silt, and is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	822 x 732 x 237 (LxWxD)	mm
Packaging unit weight	12.2	kg
Number of units per pallet	12	nr
Pallet dimensions	1200 x 1200 x 1614 (LxWxD)	mm
Pallet weight	171.4	kg



### Specification

Element	Value	Unit
Overall length	800	mm
Overall width	710	mm
Overall depth	212	mm
Sump depth	50	mm
Access upstand	50	mm
Inlet spigot Ø OD	110	mm
Inlet spigot length	90	mm
Maximum flow	11	l/s
Unit weight	12	kg
Material	HDPE / PP	

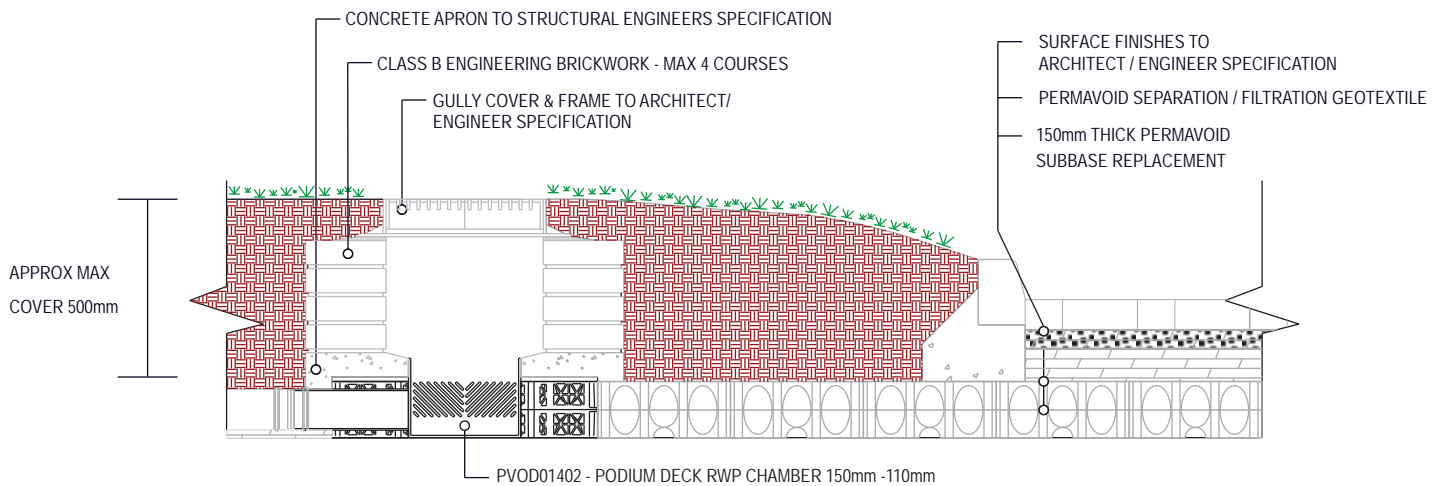
Easy access for routine maintenance

Effective water dispersal

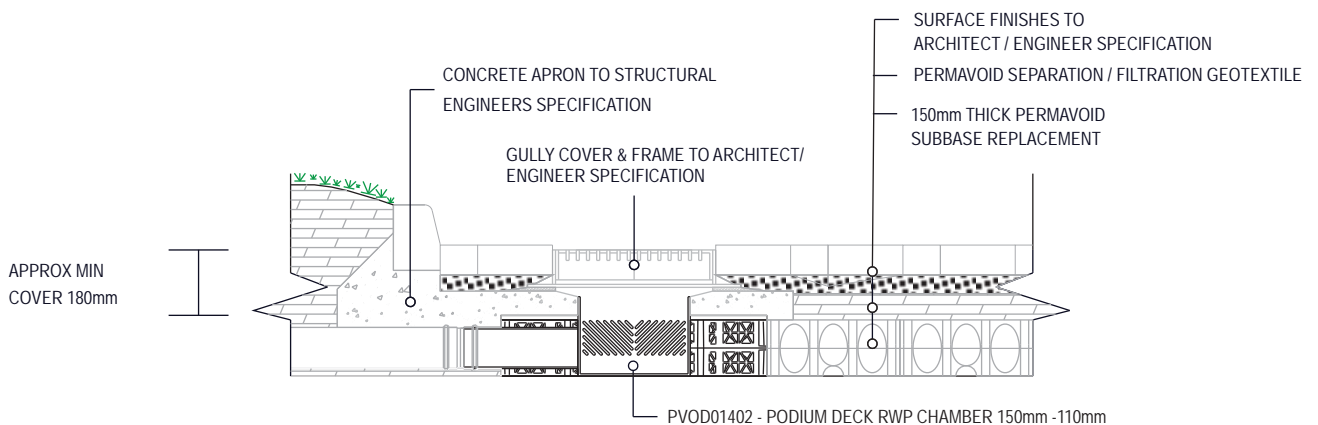
Integrates with surrounding Permavoid

## PVOD01402 - PODIUM DECK RWP CHAMBER 150mm-110mm

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Podium Deck RWP Chamber 150mm/160mm

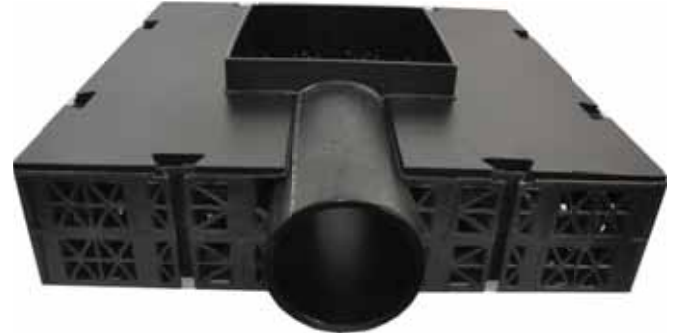
PVOD01403

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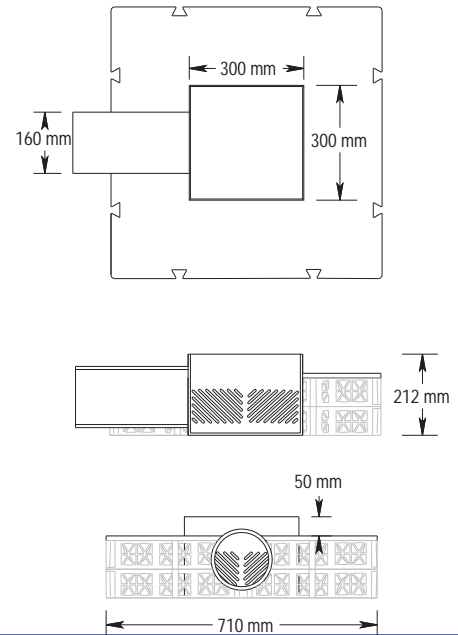
### Description

Designed for use in shallow Permavoid® podium deck constructions, the Podium Deck RWP Chamber 150mm/160mm collects rainwater via the 160mm Ø inlet pipe, filters through the perforated walls and dispersed into the surrounding Permavoid storage system. The podium deck RWP chamber has an integral 50mm sump to effectively trap silt, and is compatible with standard 160mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	822 x 732 x 237 (LxWxD)	mm
Packaging unit weight	12.4	kg
Number of units per pallet	12	nr
Pallet dimensions	1200 x 1200 x 1614 (LxWxD)	mm
Pallet weight	176.2	kg



### Specification

Element	Value	Unit
Overall length	800	mm
Overall width	710	mm
Overall depth	212	mm
Sump depth	50	mm
Access upstand	50	mm
Inlet spigot Ø OD	160	mm
Inlet spigot length	90	mm
Maximum flow	20	l/s
Unit weight	12.4	kg
Material	HDPE / PP	

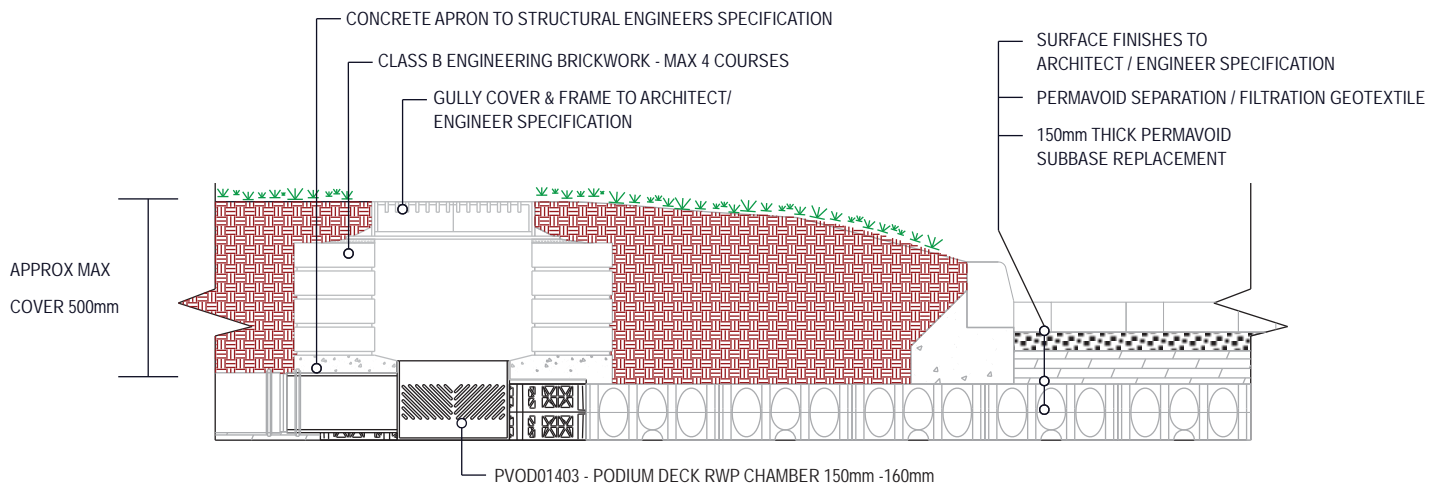
Easy access for routine maintenance

Effective water dispersal

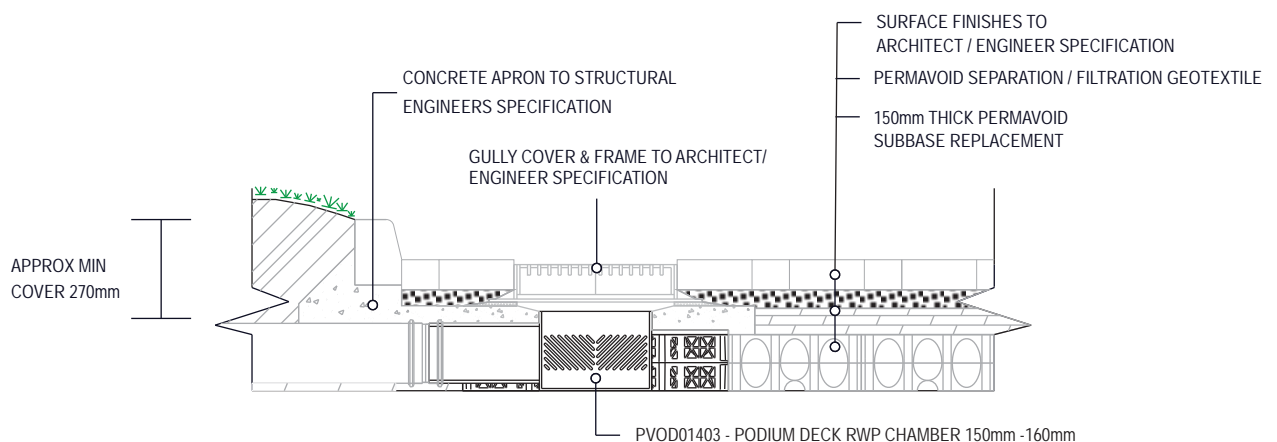
Integrates with surrounding Permavoid

## PVOD01403 - PODIUM DECK RWP CHAMBER 150mm-160mm

### APPLICATION 1 - (MAXIMUM COVER APPROXIMATELY 500mm)



### APPLICATION 2 - (MINIMUM COVER APPROXIMATELY 180mm)



## Saddle connection 110/150; 110mm Ø Spigot

PVOD02101



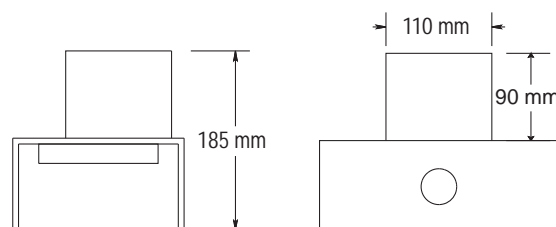
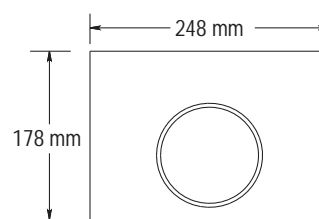
### Description

The saddle connection 110/150; 110mm Ø Spigot is a secure rigid connection point for drainage pipework to a 150mm deep Permavoid® soakaway tank. Designed to obtain optimum flow, the saddle connection fits with ease to the outside face of a plastic modular Permavoid soakaway conduit or modular bulk soakaway tank, and is held securely in place with two Permavoid shear connectors. The Permavoid saddle connection is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	200 x 270 x 207 (LxWxD)	mm
Packaging unit weight	0.7	kg
Number of units per pallet	144	nr
Pallet dimensions	1200 x 1200 x 1400 (LxWxD)	mm
Pallet weight	125.8	kg



### Specification

Element	Value	Unit
Overall length	178	mm
Overall width	248	mm
Overall depth	185	mm
Spigot OD Ø	110	mm
Spigot length	90	mm
Saddle inside depth	150	mm
Unit weight	0.661	kg
Shear pin connectors	2	nr
Material	HDPE	

Secure rigid connection

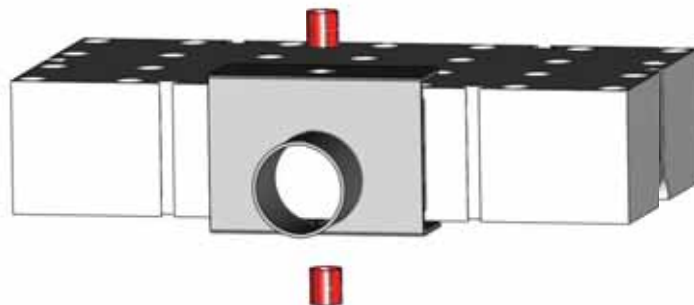
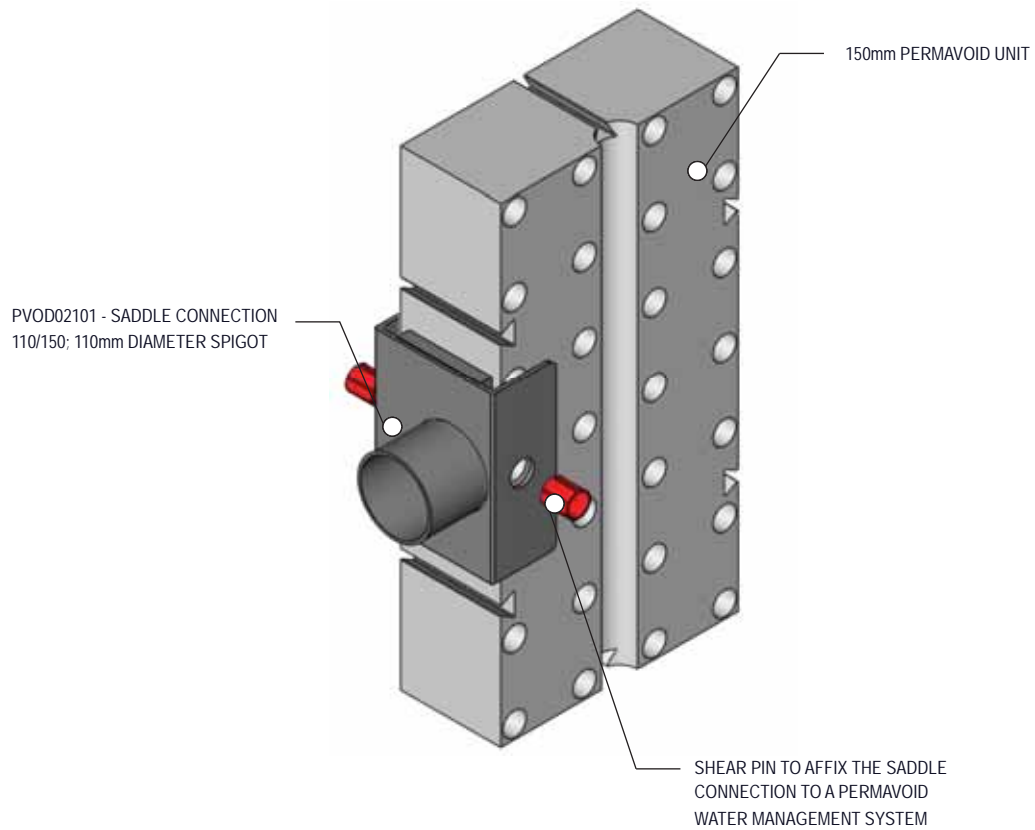
No power tools needed

Quick and Easy to Install



## PVOD02101 - SADDLE CONNECTION 110/150; 110mm DIAMETER SPIGOT

APPLICATION - CONNECTING TO A 150mm PERMAVOID UNIT



## Saddle connection 110/170; 110mm Ø Spigot

PVOD02102



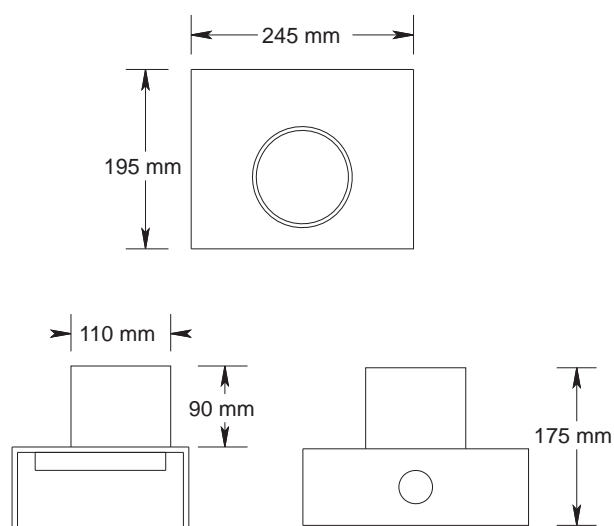
### Description

The saddle connection 110/170; 110mm Ø Spigot is a secure rigid connection point for drainage pipework to a 170mm deep Permavoid soakaway tank, formed using two 85mm deep Permavoid units. Designed to obtain optimum flow, the saddle connection fits with ease to the outside face of a plastic modular Permavoid soakaway conduit or modular bulk soakaway tank, and is held securely in place with two Permavoid shear connectors. The Permavoid saddle connection is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	217 x 267 x 197 (LxWxD)	mm
Packaging unit weight	0.7	kg
Number of units per pallet	140	nr
Pallet dimensions	1200 x 1200 x 1500 (LxWxD)	mm
Pallet weight	123	kg



### Specification

Element	Value	Unit
Overall length	195	mm
Overall width	245	mm
Overall depth	175	mm
Spigot outside diameter	110	mm
Spigot length	90	mm
Saddle inside depth	170	mm
Unit weight	0.674	kg
Shear pin connectors	2	nr
Material	HDPE	

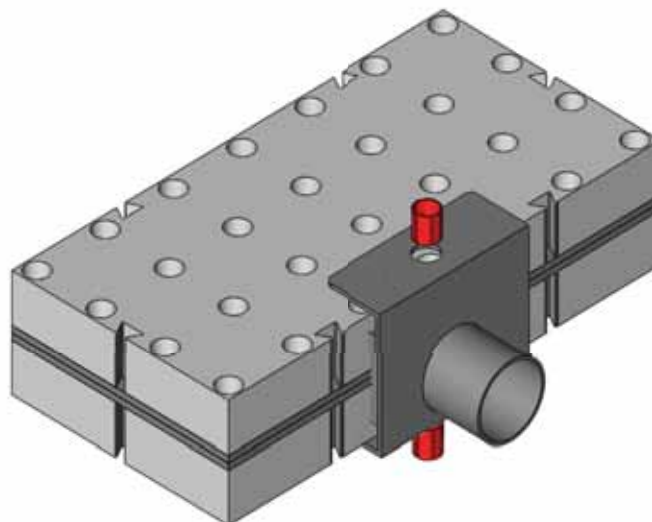
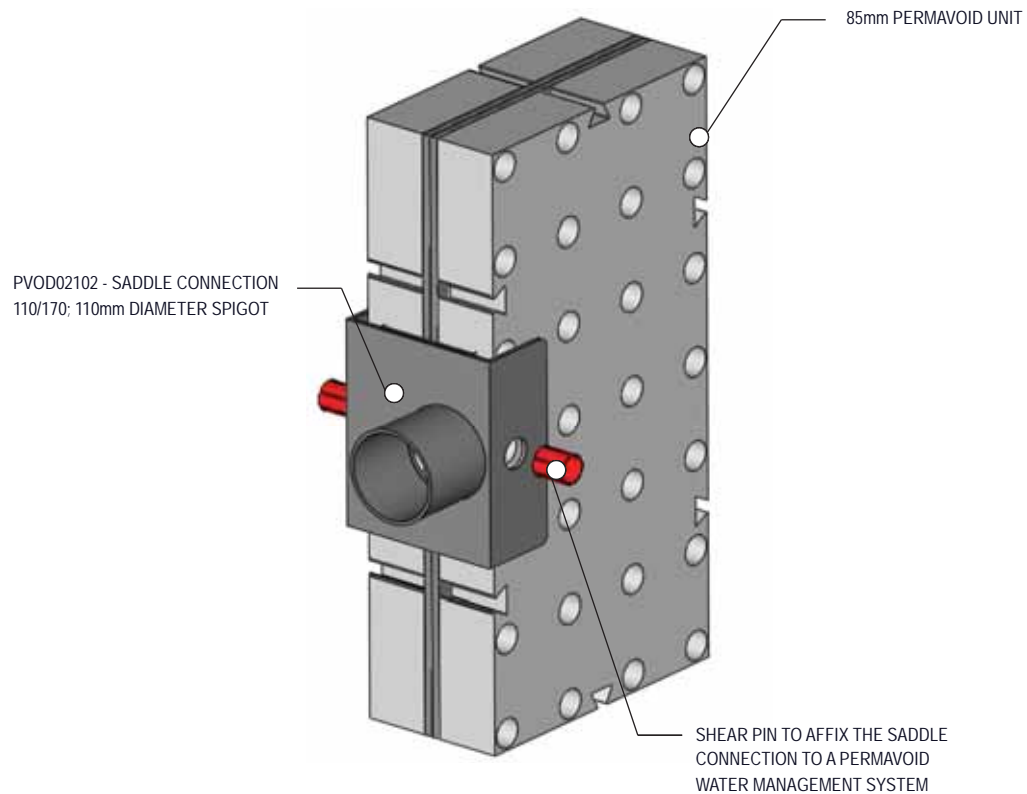
Secure rigid connection

No power tools needed

Quick and Easy to Install

## PVOD02102 - SADDLE CONNECTION 110/170; 110mm DIAMETER SPIGOT

APPLICATION - CONNECTING TO 2 Nr. 85mm PERMAVOID UNITS



## Saddle connection 160/150; 160mm Ø Spigot

PVOD02201

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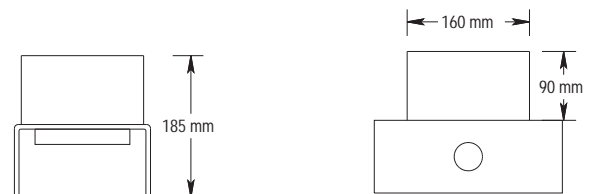
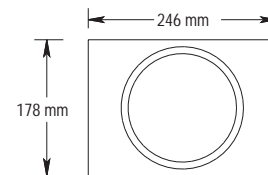
### Description

The saddle connection 160/150;160mm Ø Spigot is a secure rigid connection point for drainage pipework to a 150mm deep Permavoid® soakaway tank. Designed to obtain optimum flow, the saddle connection fits with ease to the outside face of a plastic modular Permavoid soakaway conduit or modular bulk soakaway tank, and is held securely in place with two Permavoid shear connectors. The Permavoid saddle connection is compatible with standard 160mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	200 x 268 x 207 (LxWxD)	mm
Packaging unit weight	0.9	kg
Number of units per pallet	140	nr
Pallet dimensions	1200 x 1200 x 1400 (LxWxD)	mm
Pallet weight	151	kg



### Specification

Element	Value	Unit
Overall length	178	mm
Overall width	246	mm
Overall depth	185	mm
Spigot outside diameter	160	mm
Spigot length	90	mm
Unit weight	0.879	kg
Shear pin connectors	2	nr
Material	HDPE	

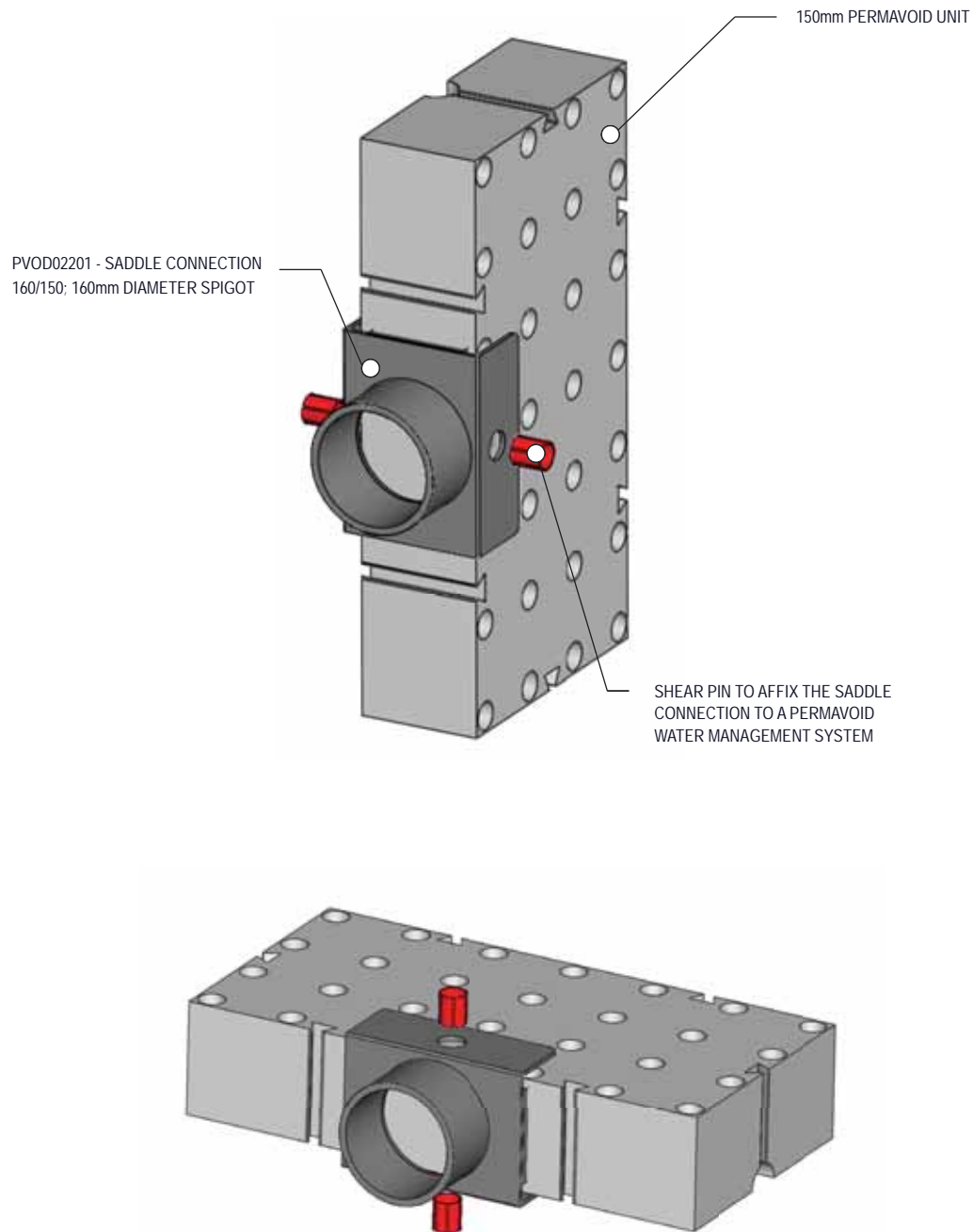
Secure rigid connection

No power tools needed

Quick and Easy to Install

## PVOD02201 - SADDLE CONNECTION 160/150; 160mm DIAMETER SPIGOT

APPLICATION - CONNECTING TO 150mm PERMAVOID UNIT



## Saddle connection 160/170; 160mm Ø Spigot

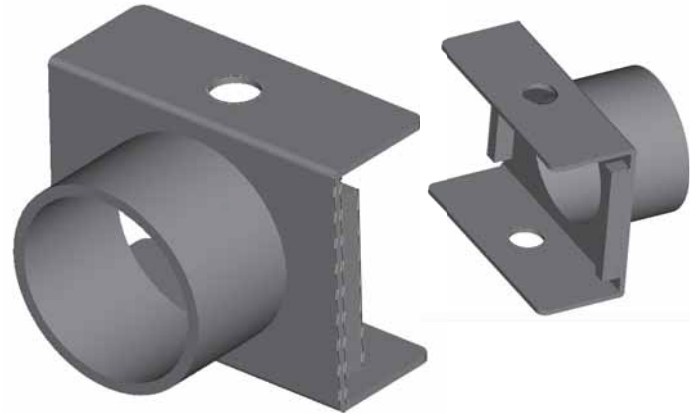
PVOD02202



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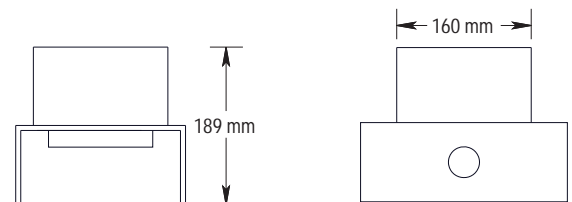
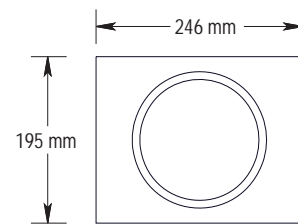
### Description

The saddle connection 160/170; 160mm Ø Spigot is a secure rigid connection point for drainage pipework to a 170mm deep permavoid soakaway tank, formed using two 85mm deep permavoid units. Designed to obtain optimum flow, the saddle connection fits with ease to the outside face of a plastic modular soakaway conduit or modular bulk soakaway tank, and is held securely in place with two Permavoid shear connectors. The Permavoid saddle connection is compatible with standard 160mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	200 x 268 x 211 (LxWxD)	mm
Packaging unit weight	0.9	kg
Number of units per pallet	140	nr
Pallet dimensions	1200 x 1200 x 1400 (LxWxD)	mm
Pallet weight	151	kg



### Specification

Element	Value	Unit
Overall length	178	mm
Overall width	246	mm
Overall depth	189	mm
Spigot outside diameter	160	mm
Spigot length	90	mm
Saddle inside depth	170	mm
Unit weight	0.9	kg
Shear pin connectors	2	nr
Material	HDPE	

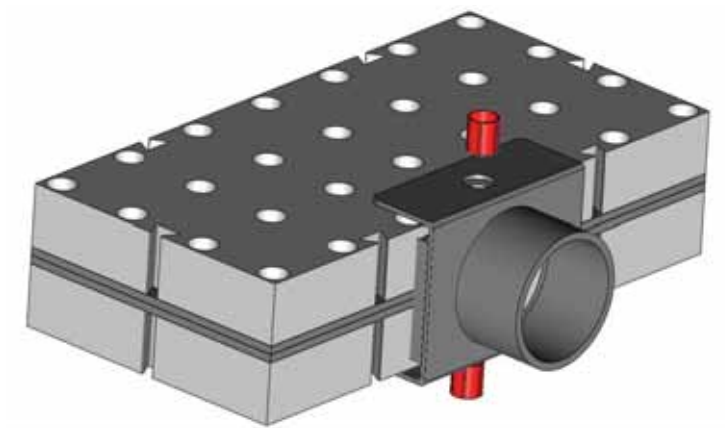
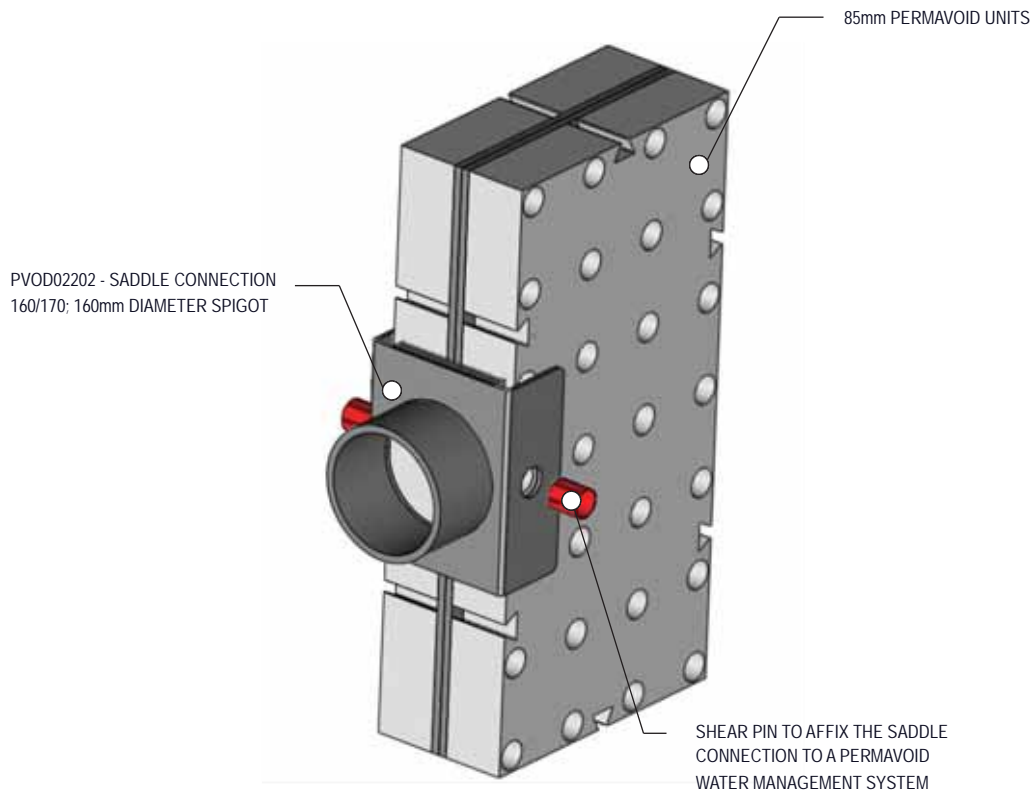
Secure rigid connection

No power tools needed

Quick and Easy to Install

## PVOD02202 - SADDLE CONNECTION 160/170; 160mm DIAMETER SPIGOT

APPLICATION - CONNECTING TO 2 Nr. 85mm PERMAVOID UNITS



## 110mm Ø Invert Membrane Sealed Tank Adaptor

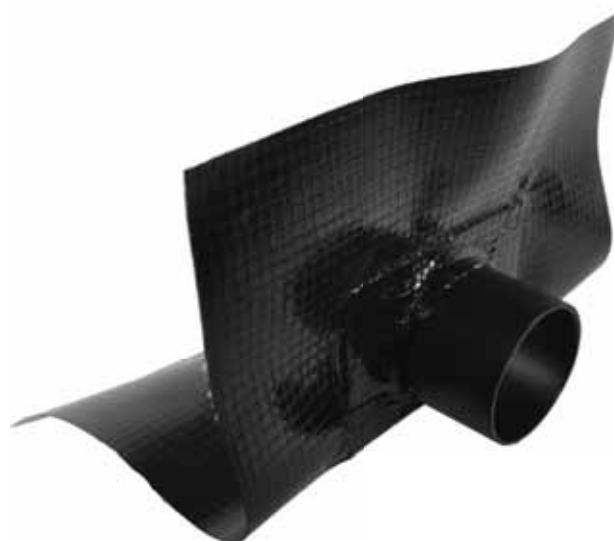
PVOD03101

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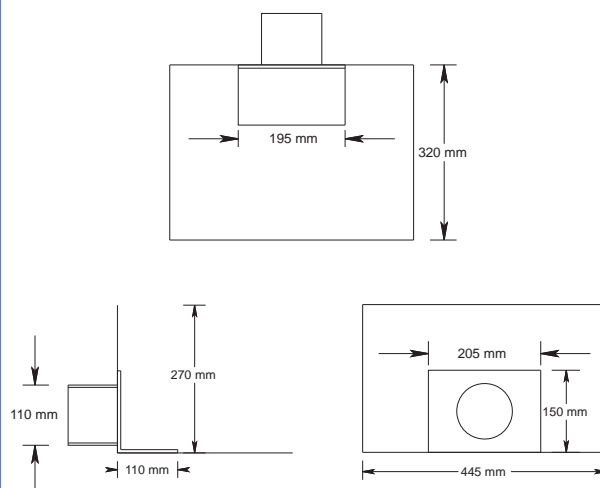
### Description

The 110mm Ø Invert Membrane Sealed Tank Adaptor has been developed to provide a fully welded watertight and secure rigid connection point for a drainage pipe to an attenuation tank. Fixed to the top or bottom edge of a tank, the flexible membrane allows a watertight heat seal on to the impermeable membrane surround to the attenuation tank. Providing a connection at the true invert level, allowing the tank to empty completely without leaving any residue. The membrane sealed adaptor is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	197 x 232 x 182 (LxWxD)	mm
Packaging unit weight	0.6	kg
Number of units per pallet	210	nr
Pallet dimensions	1200 x 1200 x 1430 (LxWxD)	mm
Pallet weight	151	kg



### Specification

Element	Value	Unit
Overall length including membrane	590	mm
Overall width including membrane	445	mm
Overall depth including membrane	200	mm
Connection plate length	150	mm
Connection plate width	205	mm
Spigot outside diameter	110	mm
Spigot length	90	mm
Unit weight	0.574	kg
Material	HDPE	

100% watertight

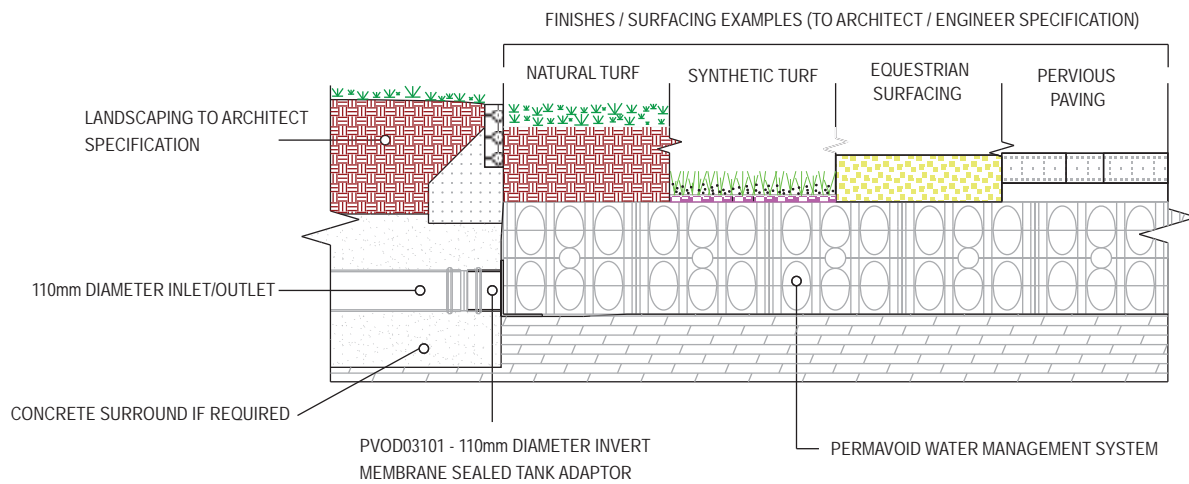
Secure connection point

110mm Ø Connection

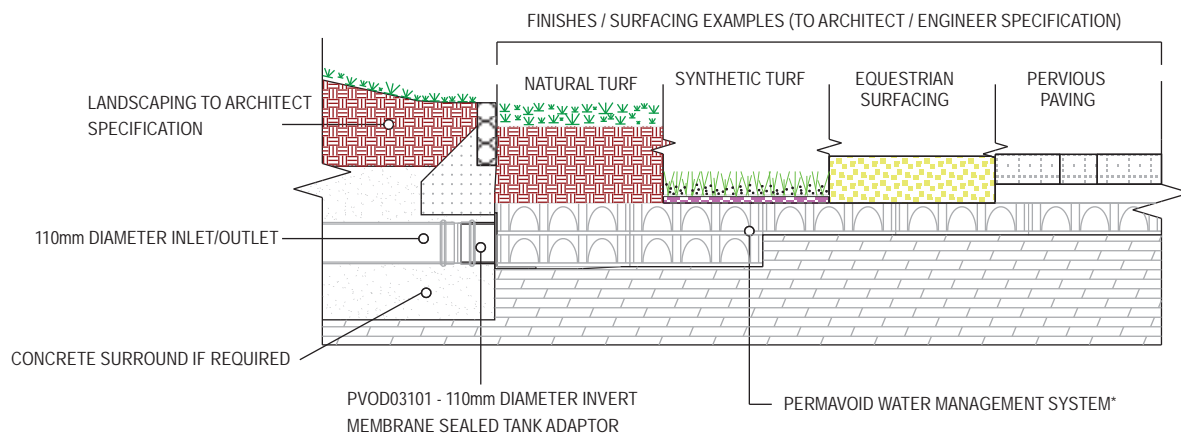


## PVOD03101 - 110mm DIAMETER INVERT MEMBRANE SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



\*85mm PERMAVOID INSTALLATIONS REQUIRE AN EXTRA LAYER OF 85mm PERMAVOID TO PROVIDE SUFFICIENT SURFACE FOR THE CONNECTION TO BE MADE TO THE SYSTEM

## 160mm Ø Invert Membrane Sealed Tank Adaptor

PVOD03102

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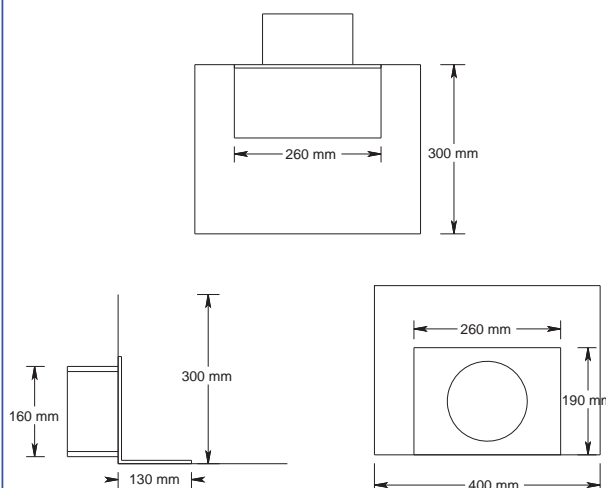
### Description

The 160mm Ø Invert Membrane Sealed Tank Adaptor has been developed to provide a fully welded watertight and secure rigid connection point for a drainage pipe to an attenuation tank. Fixed to the top or bottom edge of a tank, the flexible membrane allows a watertight heat seal on to the impermeable membrane surround to the attenuation tank. Providing a connection at the true invert level, allowing the tank to empty completely without leaving any residue. The membrane sealed adaptor is compatible with standard 160mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	262 x 282 x 222 (LxWxD)	mm
Packaging unit weight	1.1	kg
Number of units per pallet	96	nr
Pallet dimensions	1200 x 1200 x 1430 (LxWxD)	mm
Pallet weight	130.6	kg



### Specification

Element	Value	Unit
Overall length including membrane	600	mm
Overall width including membrane	400	mm
Overall depth including membrane	240	mm
Connection plate length	340	mm
Connection plate width	260	mm
Spigot outside diameter	160	mm
Spigot length	90	mm
Unit weight	0.999	kg
Material	HDPE	

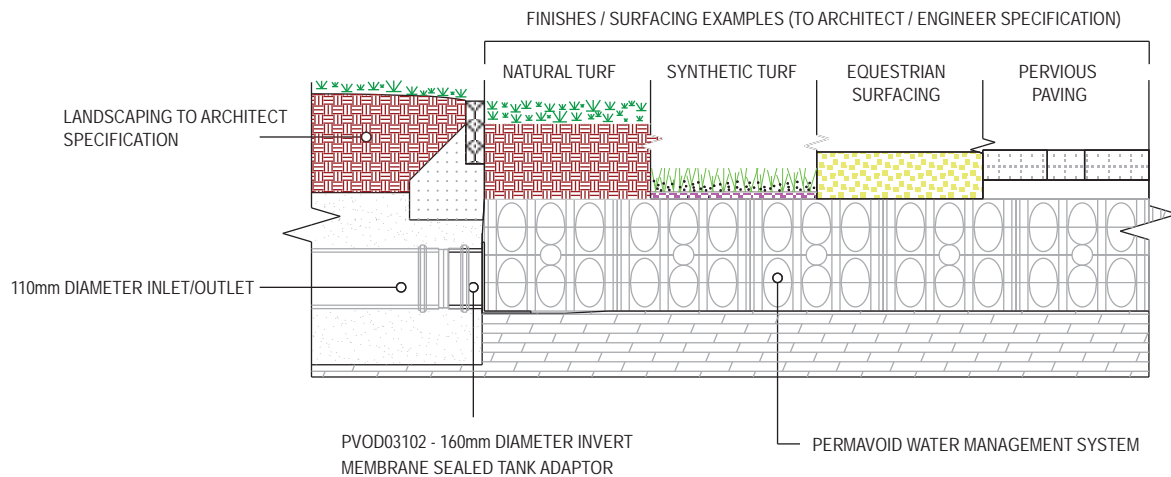
100% watertight

Secure connection point

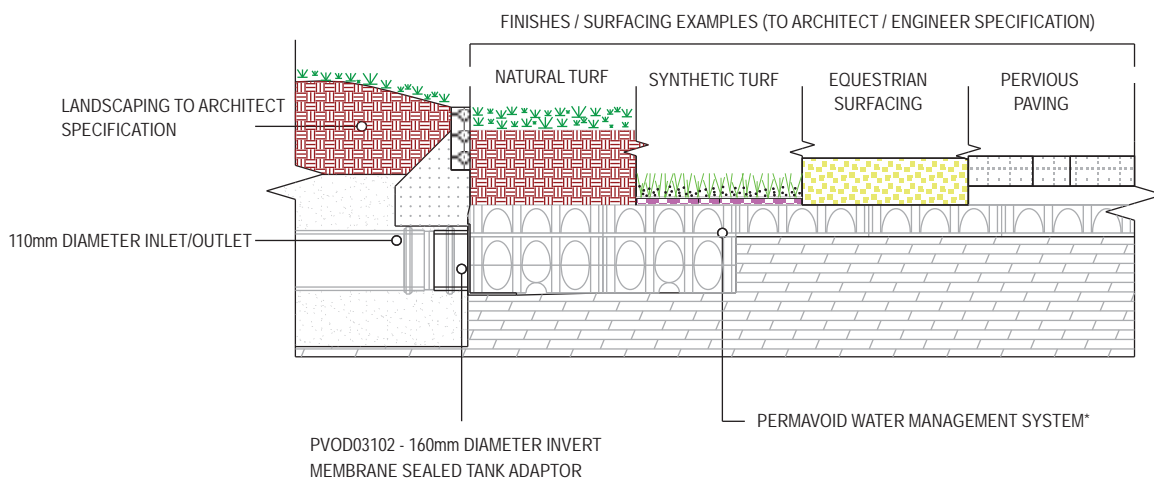
160mm Ø Connection

## PVOD03102 - 160mm DIAMETER INVERT MEMBRANE SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



\*85mm PERMAVOID INSTALLATIONS REQUIRE AN EXTRA LAYER OF 150mm PERMAVOID TO PROVIDE SUFFICIENT SURFACE FOR THE CONNECTION TO BE MADE TO THE SYSTEM

## 110mm Ø Flat Membrane Sealed Tank Adaptor

PVOD03201

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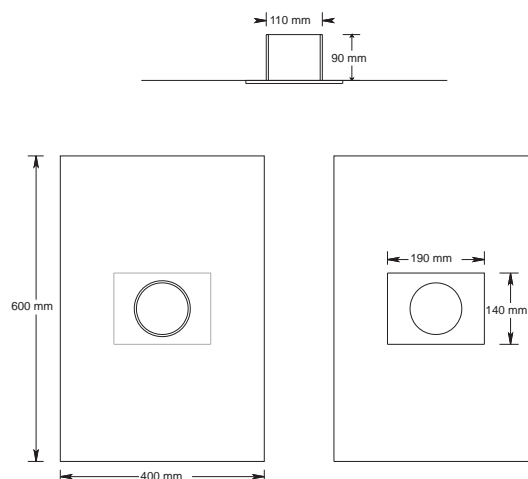
### Description

The 110mm Ø Flat Membrane Sealed Tank Adaptor is specifically designed to provide a fully welded watertight and secure rigid connection point for drainage pipework or ventilation apparatus to an attenuation tank. The flexible membrane allows a watertight heat seal on to the impermeable membrane surrounding the attenuation tank. The flat membrane sealed tank adaptor can be placed at any location on the attenuation tank, ideal to provide an outlet from the base of the tank, or a vent connection to the top of an attenuation tank. The membrane sealed adaptor is compatible with standard 110mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	252 x 177 x 132 (LxWxD)	mm
Packaging unit weight	0.532	kg
Number of units per pallet	280	nr
Pallet dimensions	1200 x 1200 x 1470 (LxWxD)	mm
Pallet weight	174	kg



### Specification

Element	Value	Unit
Overall length including membrane	600	mm
Overall width including membrane	400	mm
Overall depth including membrane	100	mm
Connection plate length	190	mm
Connection plate width	140	mm
Spigot outside diameter	110	mm
Spigot length	90	mm
Unit weight	0.432	kg
Material	HDPE	

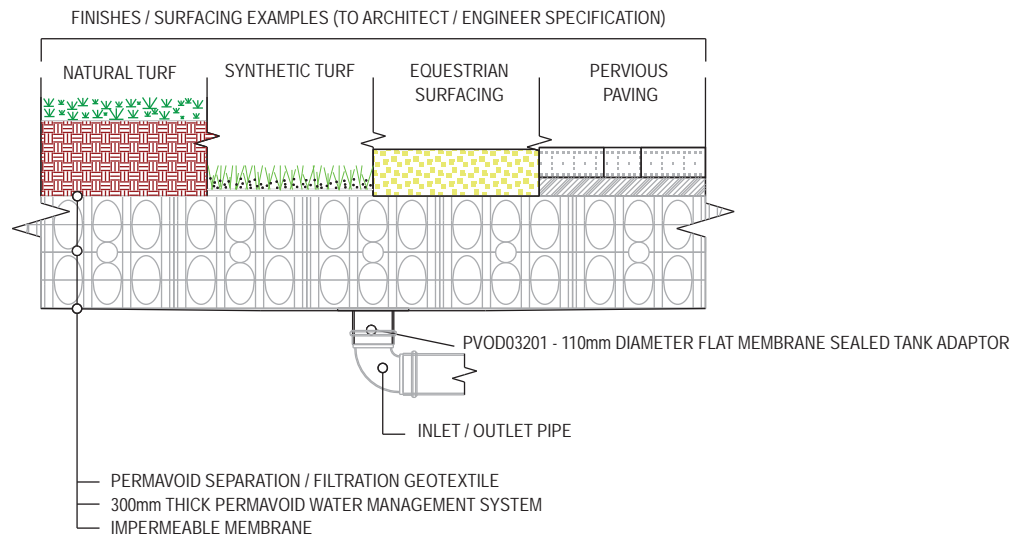
100% watertight

Secure connection point

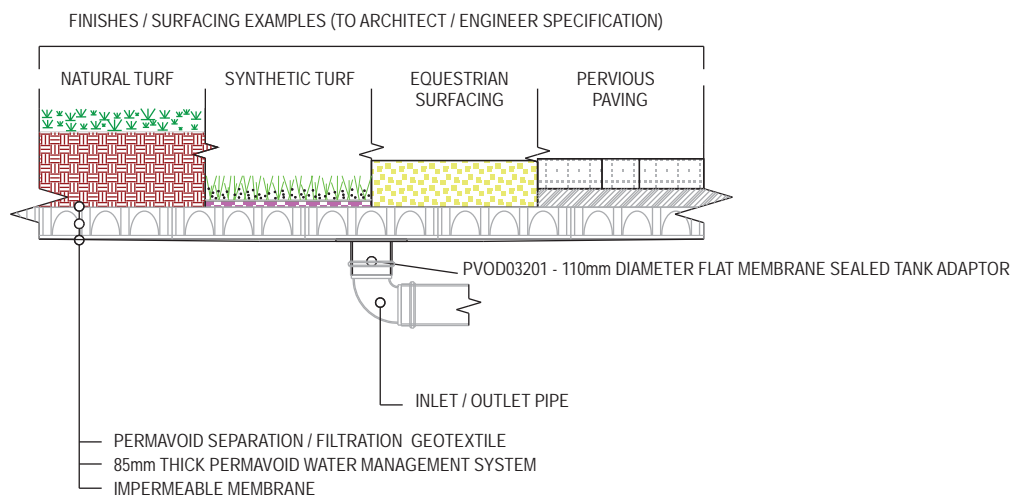
Ideal for ventilation

## PVOD03201 - 110mm DIAMETER FLAT MEMBRANE SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



## 160mm Ø Flat Membrane Sealed Tank Adaptor

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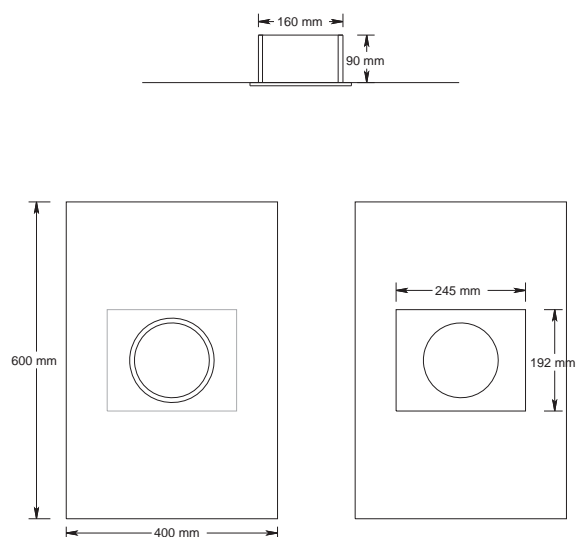
### Description

The 160mm Ø Flat Membrane Sealed Tank Adaptor is specifically designed to provide a fully welded watertight and secure rigid connection point for drainage pipework or ventilation apparatus to an attenuation tank. The flexible membrane allows a watertight heat seal on to the impermeable membrane surrounding the attenuation tank. The flat membrane sealed tank adaptor can be placed at any location on the attenuation tank, ideal to provide an outlet from the base of the tank, or a vent connection to the top of an attenuation tank. The membrane sealed adaptor is compatible with standard 160mm Ø push fit couplings.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	262 x 285 x 142 (LxWxD)	mm
Packaging unit weight	0.9	kg
Number of units per pallet	144	nr
Pallet dimensions	1200 x 1200 x 1430 (LxWxD)	mm
Pallet weight	155	kg



### Specification

Element	Value	Unit
Overall length including membrane	600	mm
Overall width including membrane	400	mm
Overall depth including membrane	100	mm
Connection plate length	245	mm
Connection plate width	192	mm
Spigot outside diameter	160	mm
Spigot length	90	mm
Unit weight	0.731	kg
Material	HDPE	

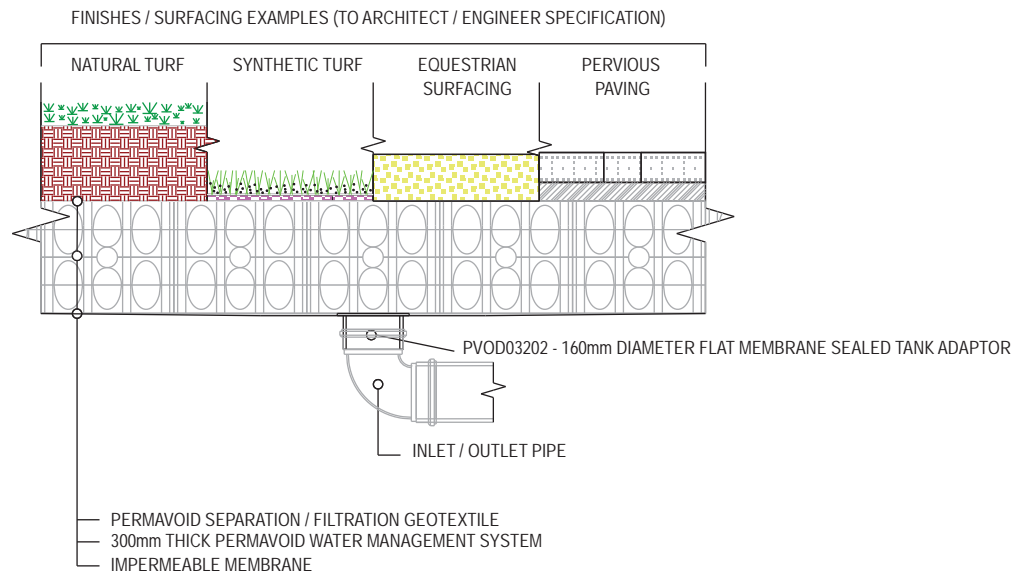
100% watertight

Secure connection point

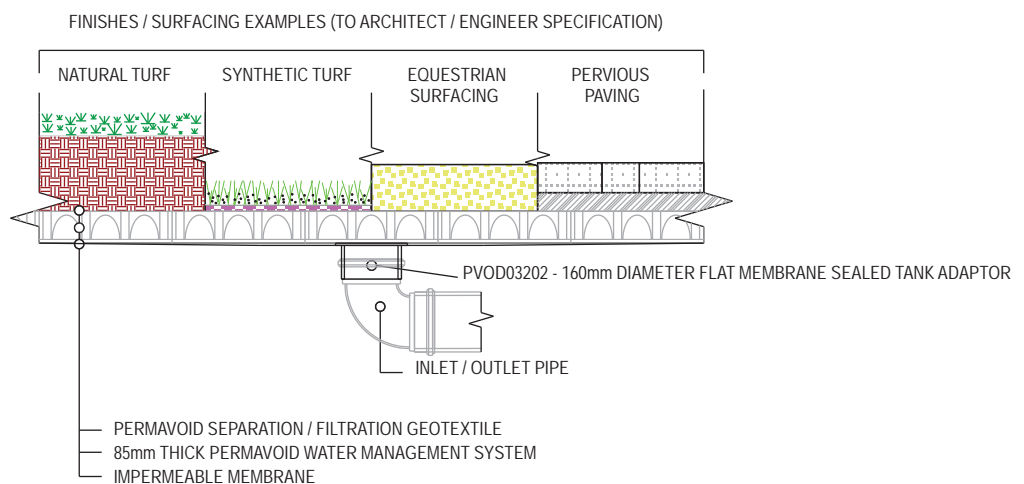
Ideal for ventilation

## PVOD03202 - 160mm DIAMETER FLAT MEMBRANE SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



## 110mm Ø Flat Mechanical Sealed Tank Adaptor

PVOD03301

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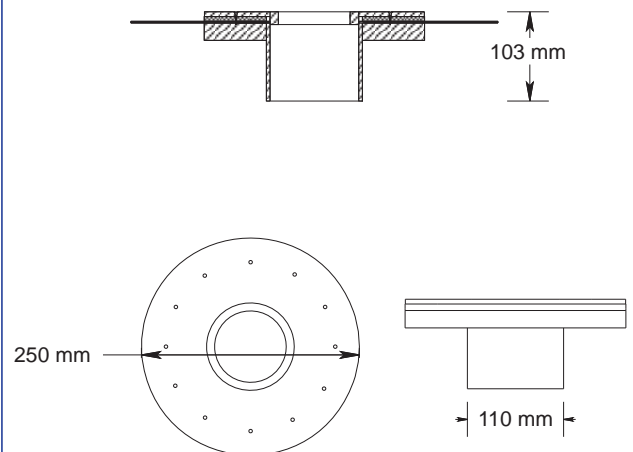
### Description

The 110mm Ø Flat Mechanical Sealed Tank Adaptor is designed with ease of installation in mind. The mechanical adaptor requires no power tools to secure to an impermeable membrane, but yet still provides a fully watertight, secure, rigid connection point. Ideal on installations in remote areas, where power may not always be available.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	282 x 282 x 127 (LxWxD)	mm
Packaging unit weight	1.3	kg
Number of units per pallet	160	nr
Pallet dimensions	1200 x 1200 x 1270 (LxWxD)	mm
Pallet weight	233	kg



### Specification

Element	Value	Unit
Overall length	103	mm
Adaptor circumference	250	mm
Spigot outside diameter	110	mm
Spigot length	90	mm
Unit weight	1.065	kg
Tank adaptor material	HDPE	
Water sealable gasket material	Closed cell polyethylene foam	

100% watertight

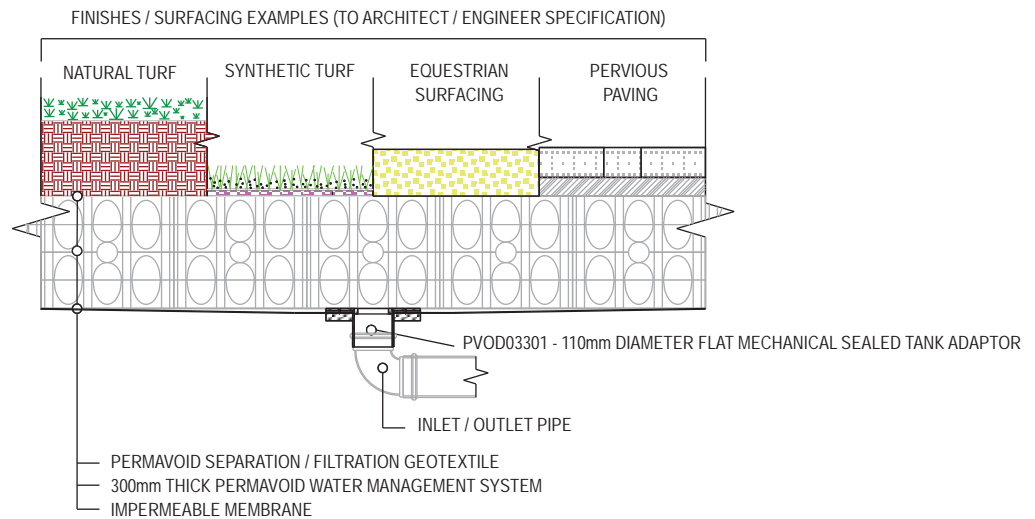
Secure connection point

Easy to install - anywhere

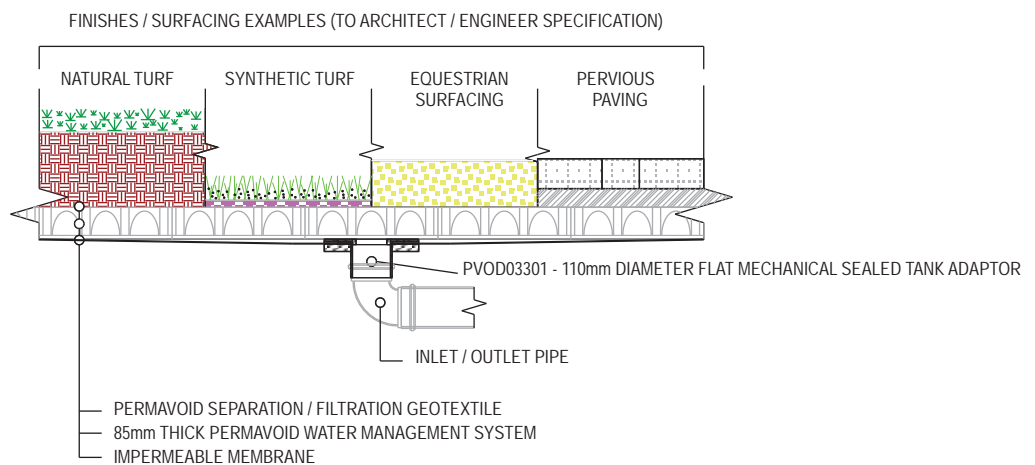


## PVOD03301 - 110mm DIAMETER FLAT MECHANICAL SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



## 160mm Ø Flat Mechanical Sealed Tank Adaptor

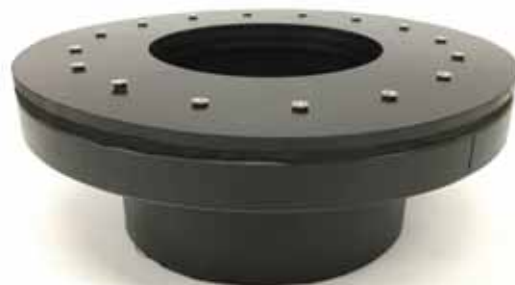
PVOD03302

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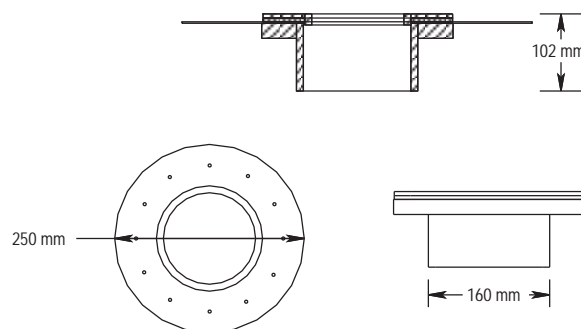
### Description

The 160mm Ø Flat Mechanical Sealed Tank Adaptor is designed with ease of installation in mind. The mechanical adaptor requires no power tools to secure to an impermeable membrane, but yet still provides a fully watertight, secure, rigid connection point. Ideal on installations in remote areas, where power may not always be available.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	282 x 282 x 127 (LxWxD)	mm
Packaging unit weight	1.217	kg
Number of units per pallet	160	nr
Pallet dimensions	1200 x 1200 x 1420 (LxWxD)	mm
Pallet weight	217	kg



### Specification

Element	Value	Unit
Overall length	102	mm
Adaptor circumference	250	mm
Spigot outside diameter	160	mm
Spigot length	90	mm
Unit weight	1.217	kg
Tank adaptor material	HDPE	
Water sealable gasket material	Closed cell polyethylene foam	

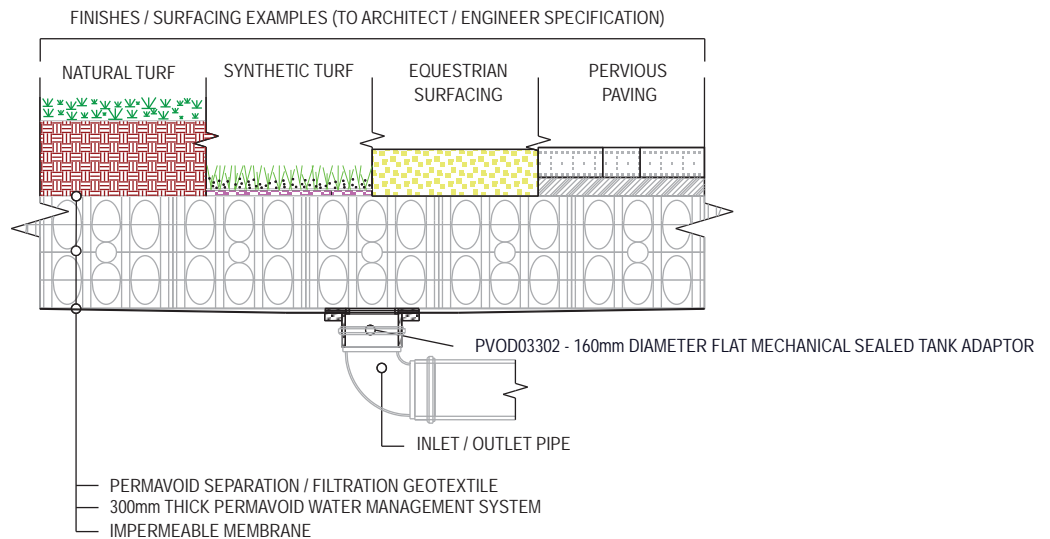
100% watertight

Secure, 160mm Ø connection point

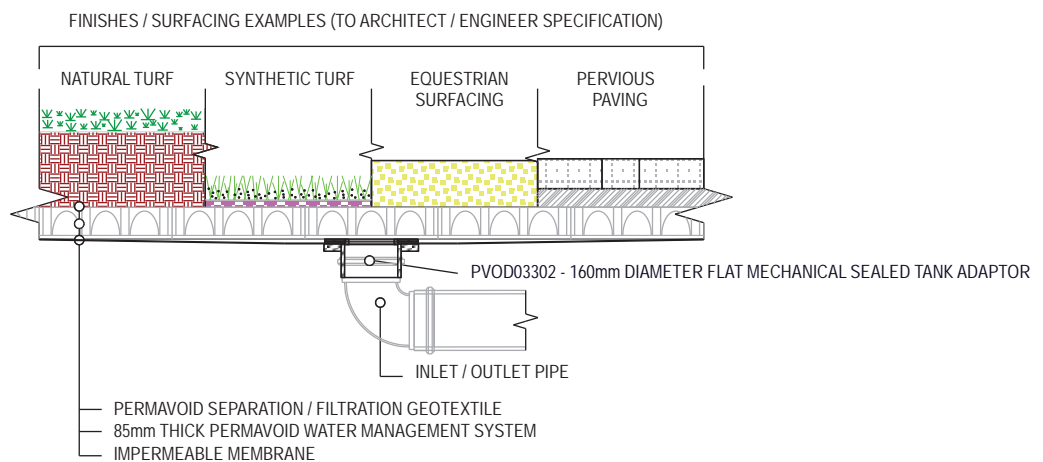
Easy to install - anywhere

## PVOD03302 - 160mm DIAMETER FLAT MECHANICAL SEALED TANK ADAPTOR

### APPLICATION 1 - 300mm PERMAVOID WATER MANAGEMENT SYSTEM



### APPLICATION 2 - 85mm PERMAVOID WATER MANAGEMENT SYSTEM



## 600mm Ø Overflow Chamber 160mm Inlet & Outlet

PVOD04101

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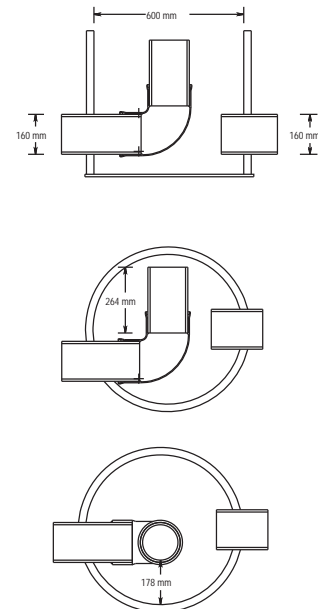
### Description

The Permavoid 600mm Overflow Chamber is one member in a family of products that ensures any Permavoid water management system performs effectively. Installed with 160mm inlet and outlet pipes as standard, the overflow chamber can be easily adjusted to a desired water level whilst simultaneously allowing overflow during heavy rain events and provide optimal water level within the system.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	682 x 887 x 607 (LxWxD)	mm
Packaging unit weight	20	kg
Number of units per pallet	2	nr
Pallet dimensions	1200 x 1200 x 1514 (LxWxD)	mm
Pallet weight	65	kg



### Specification

Element	Value	Unit
Overall length	660	mm
Overall width	865	mm
Overall depth	585	mm
Spigot OD Ø	160	mm
Inlet spigot offset from centre	50	mm
Unit weight	20	kg
Material	HDPE	

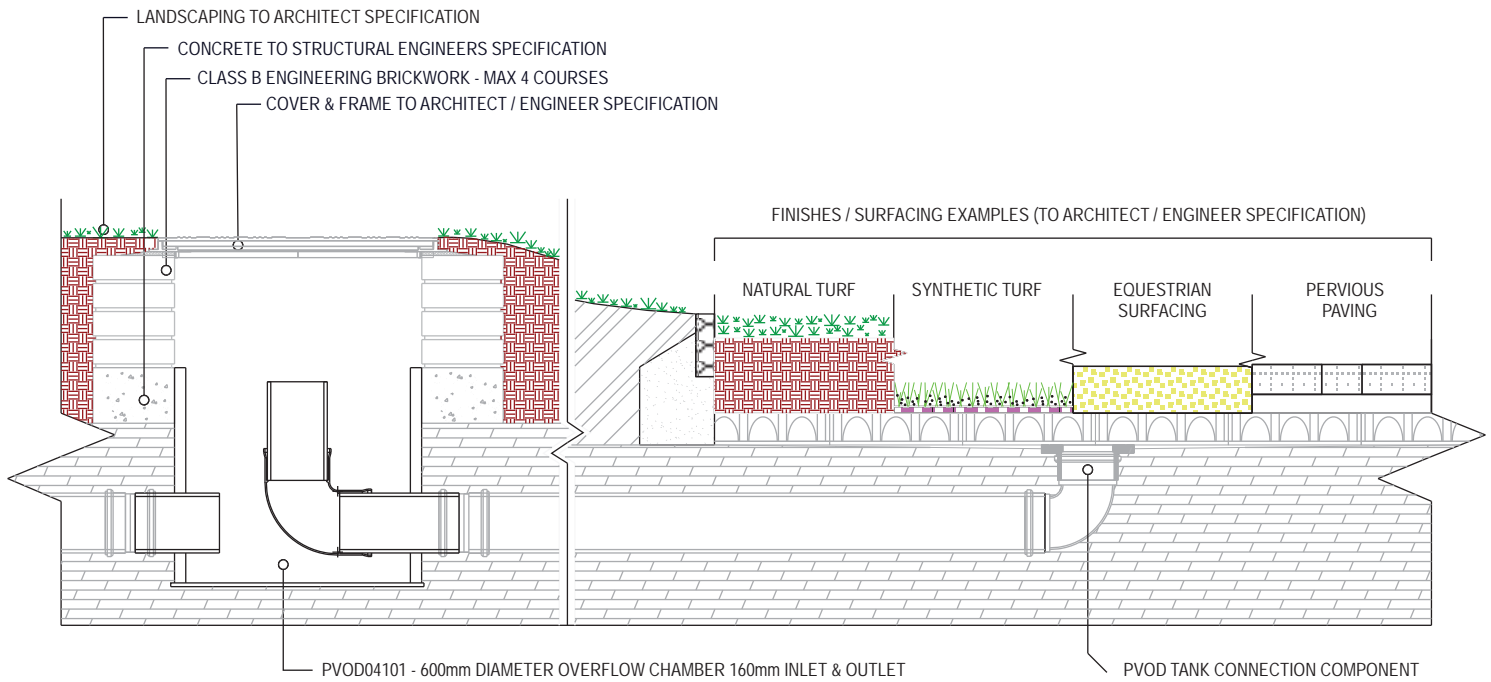
Prevents system flooding

Easy to adjust

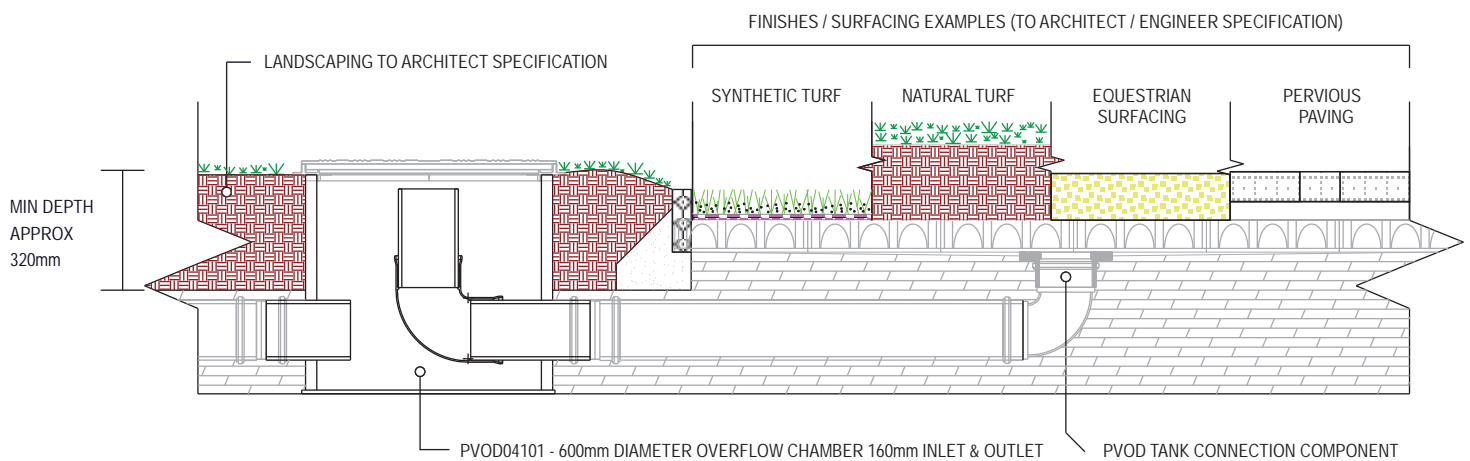
Easily accessible for maintenance

## PVOD04101 - 600mm DIAMTER OVERFLOW CHAMBER 160mm INLET & OUTLET

### APPLICATION 1 - MAXIMUM COVER APPROX 650mm



### APPLICATION 2 - MINIMUM COVER APPROX 320mm



## 600mm Ø Monitoring Chamber 160mm Inlet

PVOD04201

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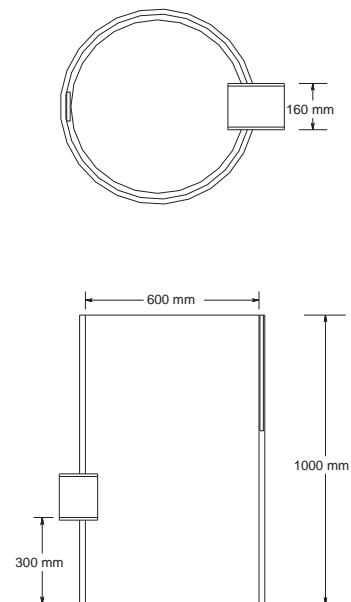
### Description

The 600mm Ø Monitoring Chamber is a stand alone chamber with the sole function of providing access to the Permavoid water management system for accurate monitoring purposes only. The monitoring chamber is an important element for each Permavoid water management system and is intended to be completely independent from any water in/out chambers providing access to undisturbed water levels within the system.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	682 x 732 x 1022 (LxWxD)	mm
Packaging unit weight	27	kg
Number of units per pallet	1	nr
Pallet dimensions	1200 x 1200 x 1172 (LxWxD)	mm
Pallet weight	52	kg



### Specification

Element	Value	Unit
Overall width	660	mm
Overall length	720	mm
Overall depth	1000	mm
Spigot OD Ø	160	mm
Sump Depth	300	mm
Unit weight	27	kg
Material	HDPE	

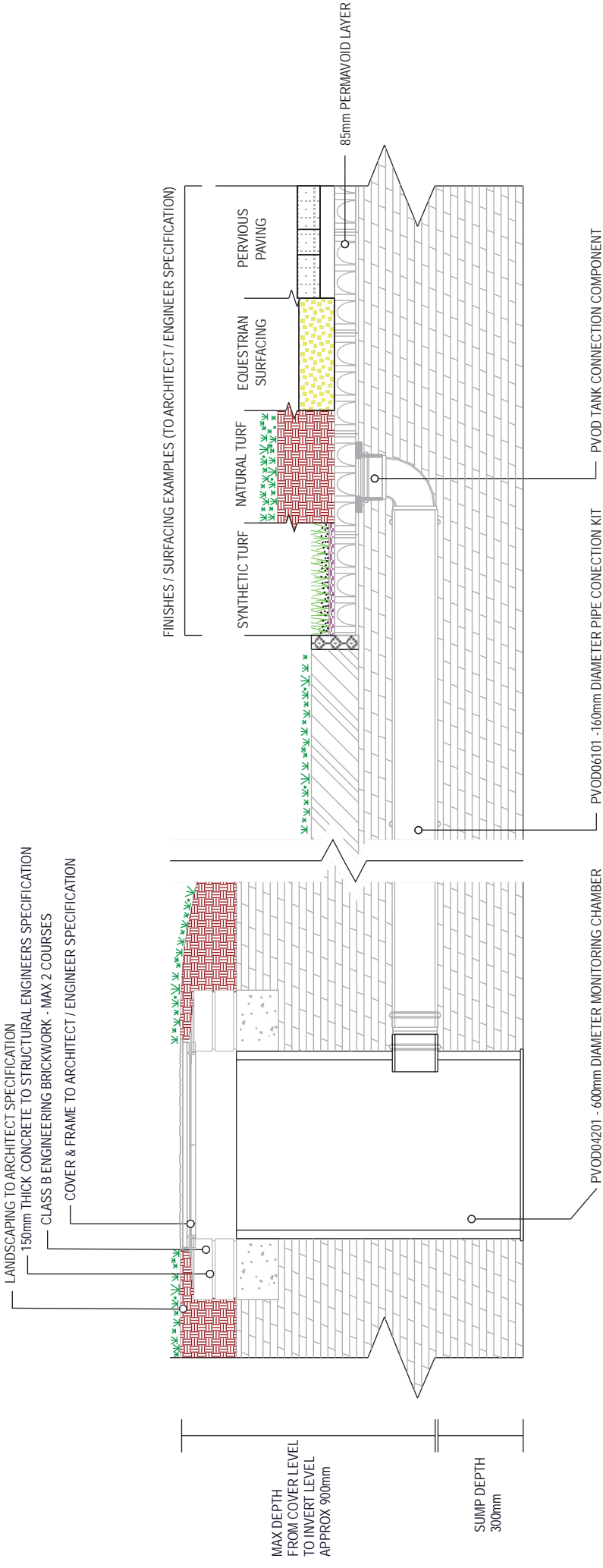
Provides accurate monitoring

Independent from other chambers

Bespoke design

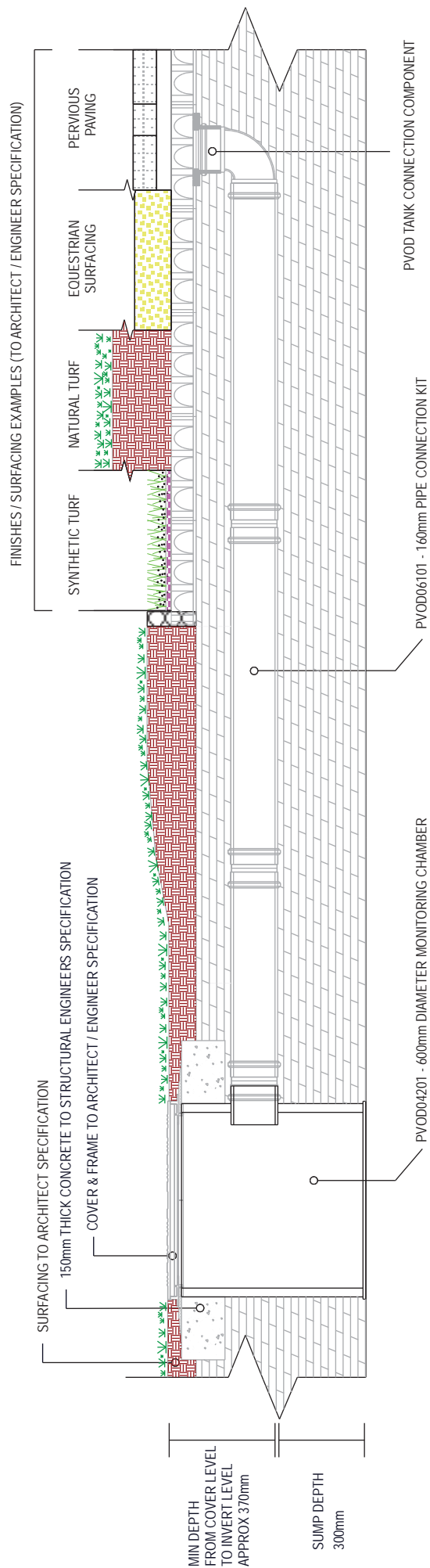
# PVOD04201 - 600mm DIAMETER MONITORING CHAMBER

## APPLICATION 1 - MAXIMUM RECOMMENDED CHAMBER DEPTH (APPROX 1200mm)



NOTE: IN ACCORDANCE WITH BUILDING REGULATIONS H1, CLEARANCE OF BLOCKAGES, TABLE 11. SHOULD THE DEPTH OF THE CHAMBER FROM INVERT LEVEL, TO THE TOP OF THE SPECIFIED COVER EXCEED 1.2 METRES, A RESTRICTED ACCESS COVER NO GREATER THAN 350mm MUST BE USED FOR HEALTH AND SAFETY REASONS TO DETER ENTRY.

## APPLICATION 2 - MINIMUM RECOMMENDED CHAMBER DEPTH (APPROX 670mm)





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## 600mm Ø Multi-use / Pump Chamber

PVOD04202

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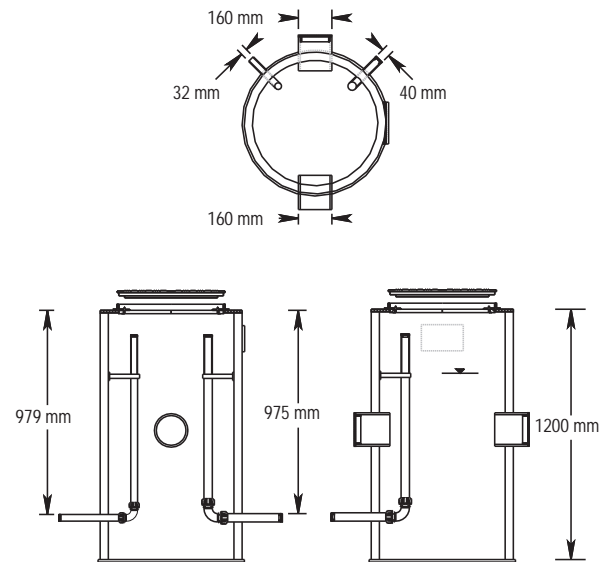
### Description

The Permavoid 600mm Ø Multi-use / Pump chamber, is a multi-function universal chamber, which may be used as either a pumping, or monitoring chamber. The primary use of the 600mm Ø Multi-use / Pump Chamber is to give a visual indication of the water levels within a permavoid water management system. The chamber has pre-fabricated connections to enable a pump to be incorporated for example, to pump water to a purification unit. The 32mm ø and 40mm ø inlet connections are unique to the family of Permavoid Monitoring Chambers which makes this chamber compatible for international markets.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	970 x 970 x 1222 (LxWxD)	mm
Packaging unit weight	50.3	kg
Number of units per pallet	1	nr
Pallet dimensions	1200 x 1200 x 150 (LxWxD)	mm
Pallet weight	75.3	kg



### Specification

Element	Value	Unit
Chamber diameter	600	mm
Overall depth	1200	mm
Mains water inlet pipe 1 diameter	32	mm
Mains water inlet pipe 2 diameter	40	mm
Spigot outside diameter	160	mm
Lockable cover diameter	500	mm
Unit weight	50	kg

Multi-function

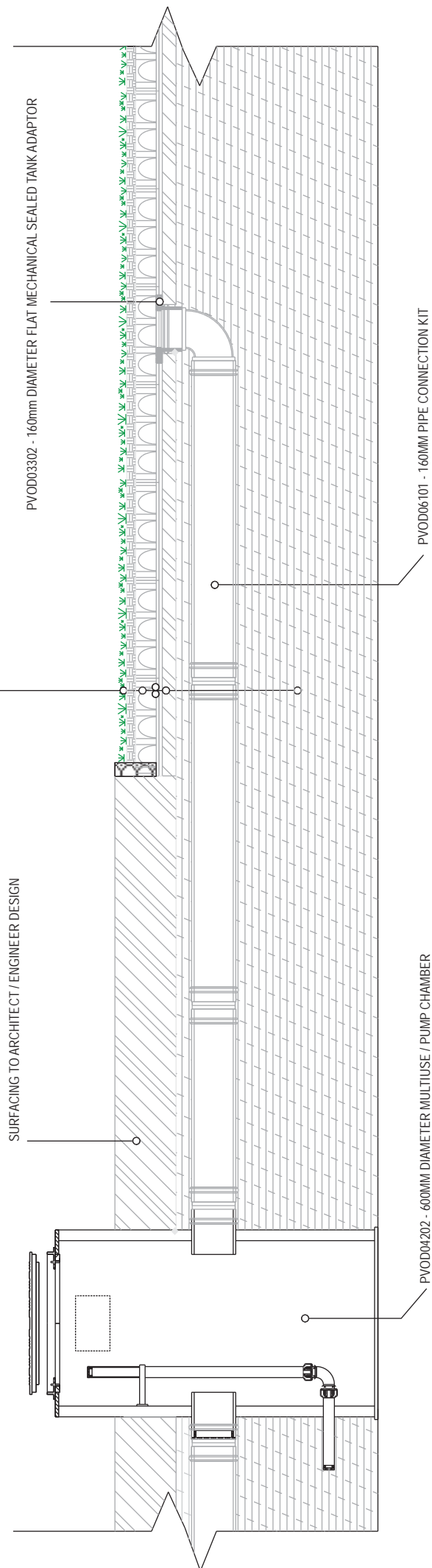
Designed for use in international markets

Bespoke design

## PVOD04202 - 600mm DIAMETER MULTIUSE / PUMP CHAMBER

### APPLICATION 1 - CONNECTED TO A PERMAVOID WATER MANAGEMENT SYSTEM VIA PVOD06101 & PVOD03302

- TURF FINISHES TO ARCHITECT / ENGINEERS SPECIFICATION
- PERMAVOID WATER MANAGEMENT SYSTEM
- IMPERMEABLE MEMBRANE
- PERMAVOID PROTECTION GEOTEXTILE
- 50MM OF AGGREGATE BEDDING LAYER
- REGULATION SUB-BASE LAYER



## 600mm Ø Equivalence Chamber 160mm Inlet & Outlet

PVOD04301

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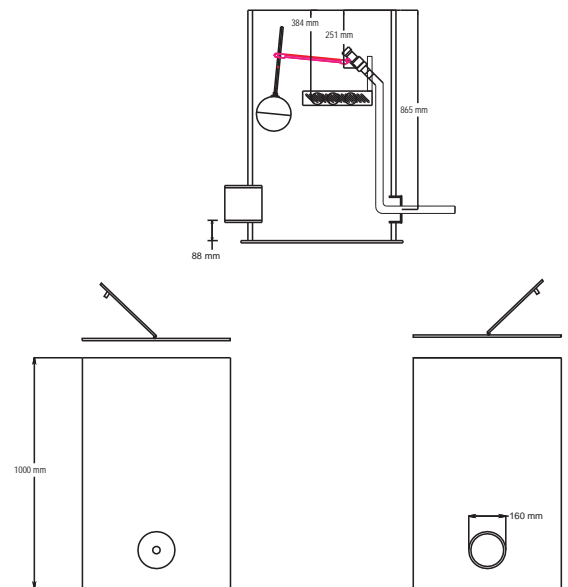
### Description

The 600mm Ø Permavoid Equivalence chamber is a mains water entry point, should any permavoid attenuation system need water levels maintaining. The chamber can allow for systems to be set to a specified level and ensures water influx does not exceed the set level. The Permavoid equivalence chambers are a reliable way of maintaining a water level within systems limited to areas of 1000m<sup>2</sup>, especially in conjunction with Permavoid capillary cones.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	682 x 832 x 1022 (LxWxD)	mm
Packaging unit weight	35	kg
Number of units per pallet	1	nr
Pallet dimensions	1200 x 1200 x 1172 (LxWxD)	mm
Pallet weight	60	kg



### Specification

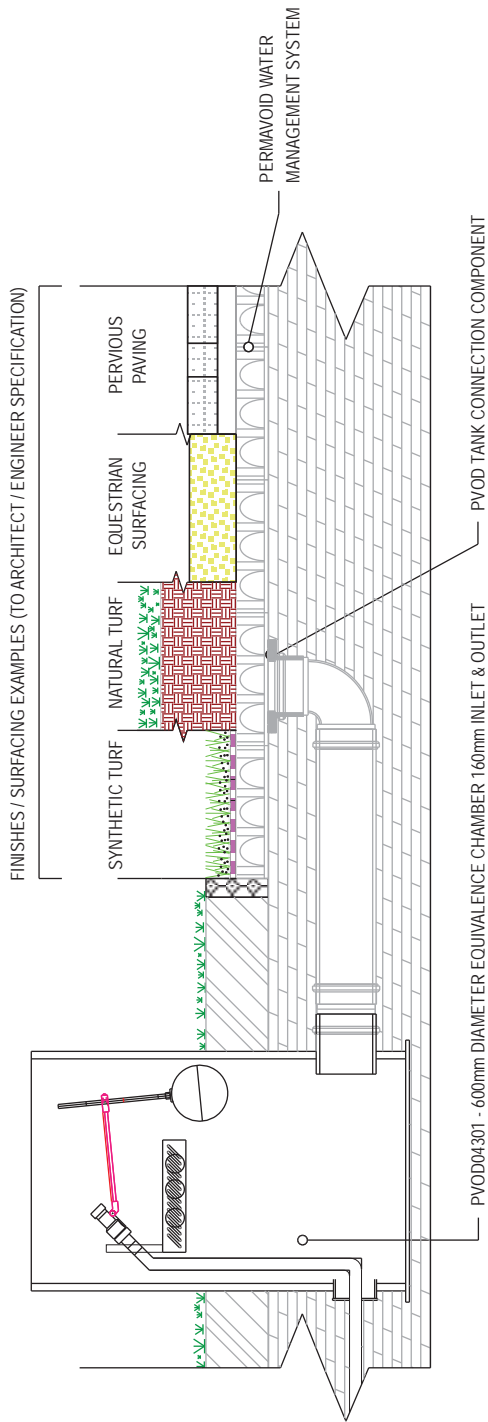
Element	Value	Unit
Overall length	660	mm
Overall width	810	mm
Overall depth	1000	mm
Outlet spigot OD Ø	160	mm
Mains water inlet spigot Ø	32	mm
unit weight	60	kg
Material	HDPE	

Reliable water supply

Easily adjustable

Effective and efficient

# PVOD04301 - 600mm EQUIVALENCE CHAMBER 160mm INLET & OUTLET



## 900mm Ø Equivalence Chamber 160mm Inlet & Outlet



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PVOD04302

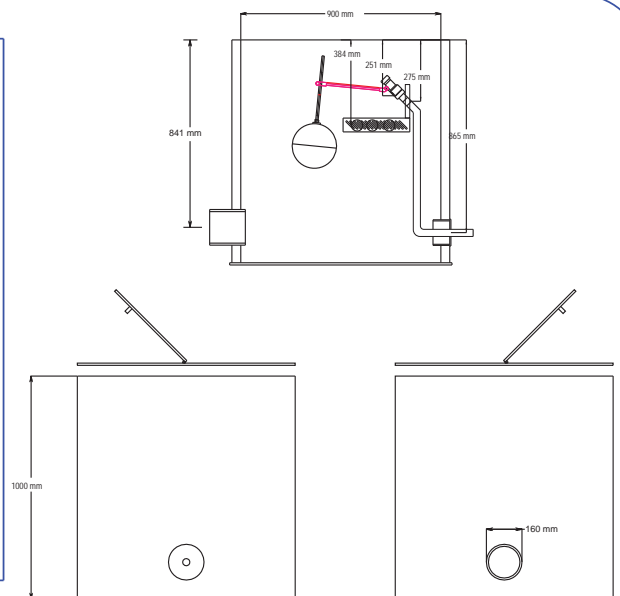
### Description

The 900mm Permavoid Equivalence chamber is a mains water entry point, should any permavoid attenuation system need water levels increasing. The chamber can allow for the system to be set to a specified levels and ensures water influx does not exceed the set level. The Permavoid equivalence chambers are a reliable way of maintaining a water level within systems limited to areas of 2000m<sup>2</sup>, especially in conjunction with Permavoid capillary cones.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	1207 x 1207 x 1034 (LxWxD)	mm
Packaging unit weight	50	kg
Number of units per pallet	1	nr
Pallet dimensions	Special	
Pallet weight	75	kg



### Specification

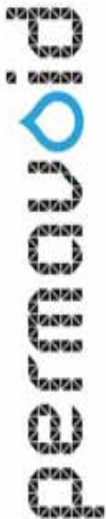
Element	Value	Unit
Overall length	1185	mm
Overall width	1185	mm
Overall depth	1012	mm
Outlet spigot OD ø	160	mm
Mains water inlet OD ø	32	mm
Unit weight	50	kg
Material	HDPE	

Reliable water supply

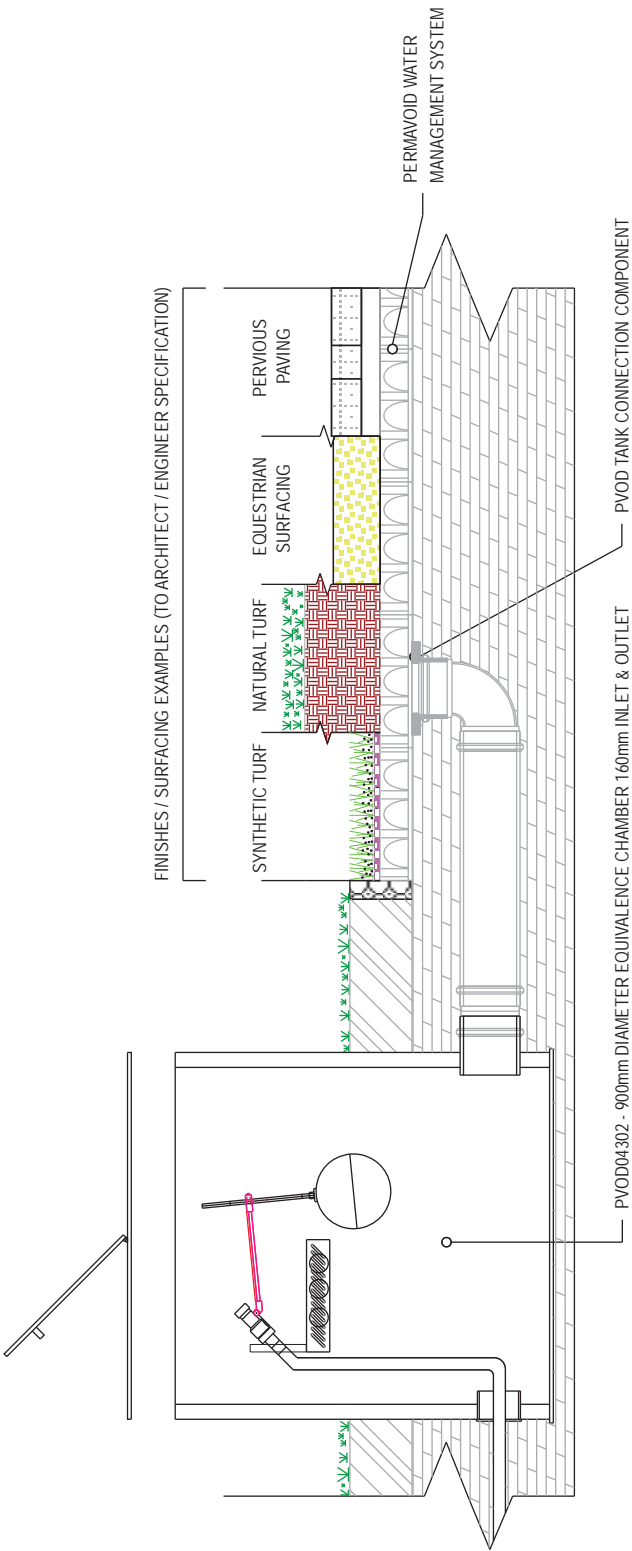
Easily adjustable

Effective and efficient

PVOD04302 - 900mm EQUIVALENCE CHAMBER 160mm INLET & OUTLET



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## 600mm Ø Silt Pit Chamber 160mm Spigots

PVOD04401

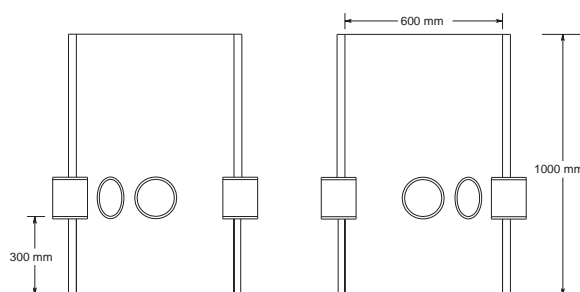
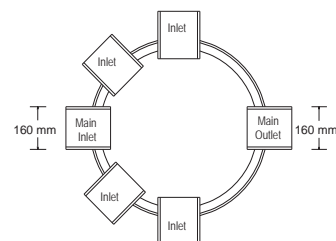
### Description

The 600mm Ø Silt Pit Chamber 160mm Inlet & Outlet, is key in maintaining a properly functioning permavoid system. The silt pit chamber can have up to 5nr 160mm Ø inlet spigots that channel water into the silt pit. The chamber is designed to facilitate the removal and deposition of silt and debris from the collected water. The chamber spigots are sized to fit standard underground 160mm Ø push-fit couplings and other 160mm Ø PVOD products. The chamber can easily be cut to size, to suit individual site levels.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	672 x 672 x 1032 (LxWxD)	mm
Packaging unit weight	30	kg
Number of units per pallet	2	nr
Pallet dimensions	1200 x 1200 x 1500 (LxWxD)	mm
Pallet weight	85	kg



### Specification

Element	Value	Unit
Overall length	1000	mm
Overall width	650	mm
Overall weight	30	kg
Inlet & outlet spigot OD ø	160	mm
No. of inlet spigots	5	nr
No. of outlet spigots	1	nr

Removes debris and silt

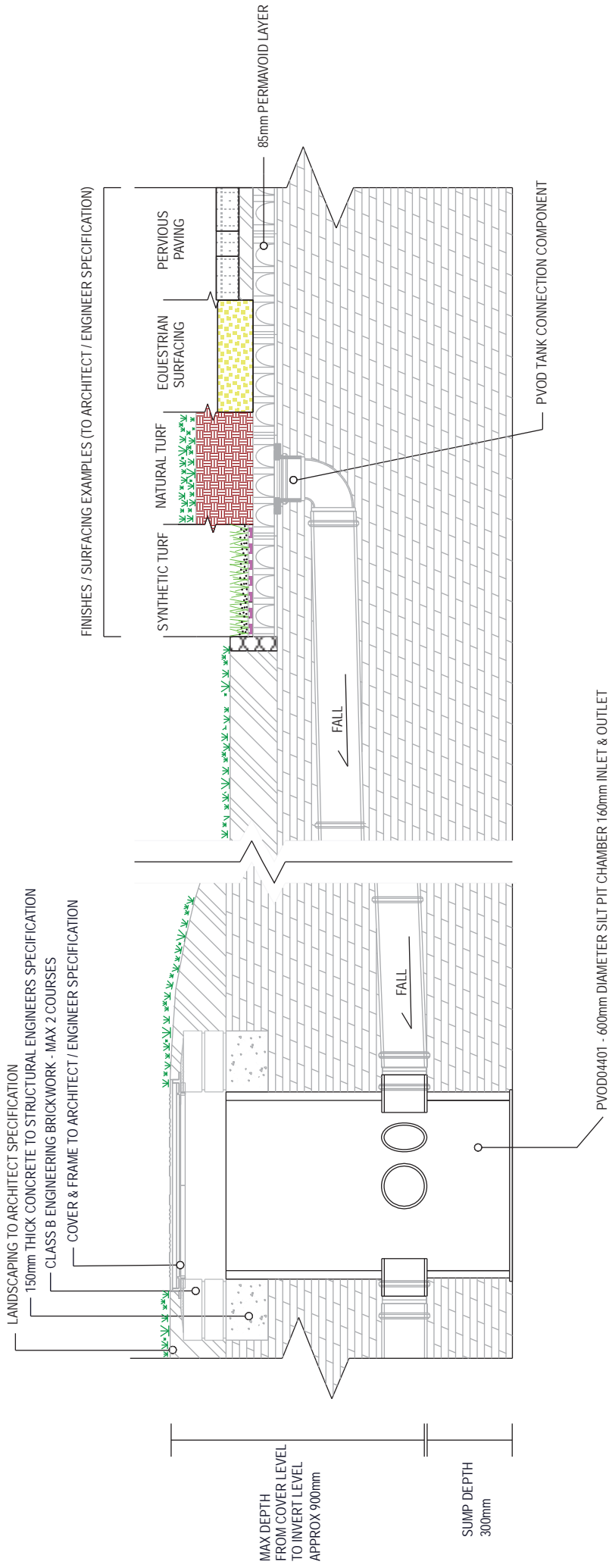
Easy to Install

Compatible with other PVOD components



PVOD04401 - 600mm DIAMETER SILT PIT CHAMBER 160mm INLET & OUTLET

APPLICATION 1 - MAXIMUM RECOMMENDED CHAMBER DEPTH (APPROX 1200mm)



<sup>47</sup> NOTE: IN ACCORDANCE WITH BUILDING REGULATIONS H1, CLEARANCE OF BLOCKAGES, TABLE 11.

SHOULD THE DEPTH OF THE CHAMBER FROM INVERT LEVEL, TO THE TOP OF THE SPECIFIED COVER EXCEED 1.2 METRES, A RESTRICTED ACCESS

COVER NO GREATER THAN 350mm MUST BE USED FOR HEATH AND SAFETY REASONS TO DETER ENTRY.



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## Diffuser Unit 710x710x150; 110mm Ø Socket

PVOD05101

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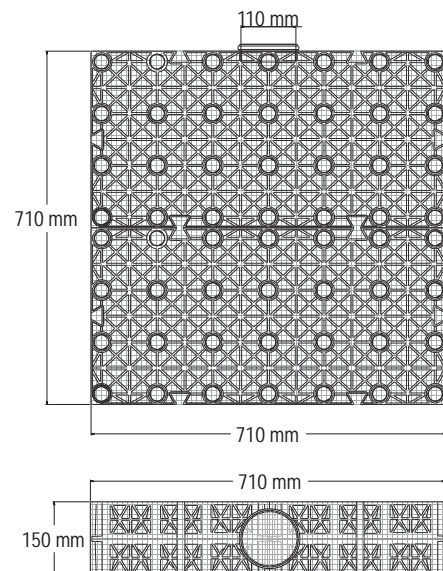
### Description

The Permavoid Diffuser Unit 710x710x150; 110mm Ø Socket is used for the efficient diffusion of collected surface water runoff in or out of permeable aggregates. This technique can be utilised in conjunction with both pervious and impervious surfaces, in particular where there are high groundwater levels, contamination or shallow rock layers. Each diffuser module is complete with a pre-formed 110mm Ø push fit socket for easy connection to standard PVC-u underground pipework. All diffusers are encapsulated by a 2mm mesh which avoids debris clogging and provides an excellent open surface area for surface water runoff to easily flow into the surrounding aggregate.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	726 x 712 x 152 (LxWxD)	mm
Packaging unit weight	7	kg
Number of units per pallet	27	nr
Pallet dimensions	1200 x 1200 x 150 (LxWxD)	mm
Pallet weight	214	kg



### Specification

Element	Value	Unit
Unit length	710	mm
Unit width	710	mm
Unit depth	150	mm
Socket OD Ø	110	mm
No. of sockets	1	nr
Approximate storage volume	70	L
Effective perforated surface area	59	%
Maximum roof catchment area *	100	m2
Unit weight	7	kg
Material	HDPE / PP	

Diffuse up to 100m2 roof catchment

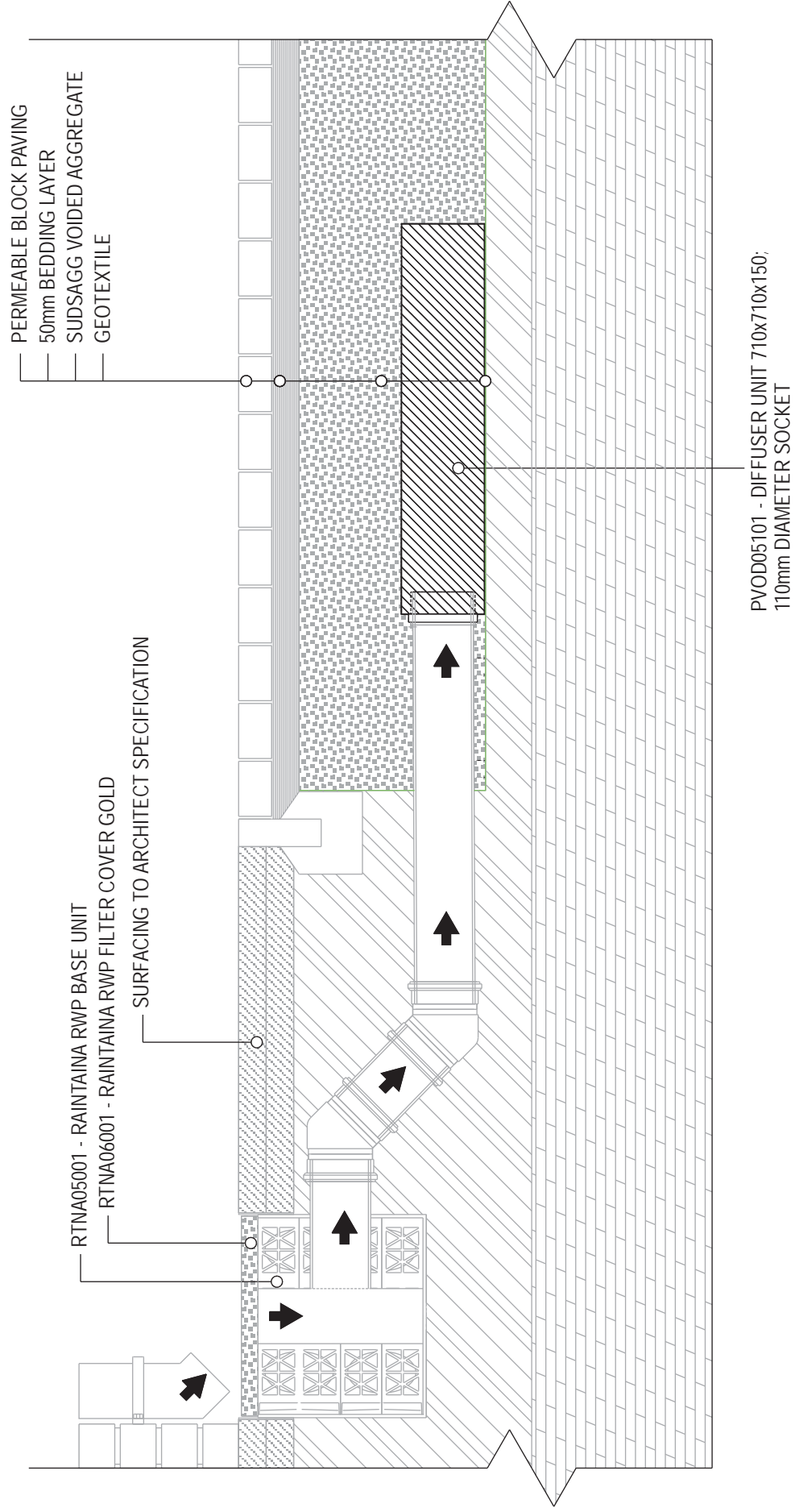
Mesh encapsulation to avoid clogging

Standard PVC-u 110mm Ø Socket Connection

\*Based on rainwater dispersal into a granular material with permeability greater than or equal to 0.02 m/s, in accordance with UK building regulations. Please check the design and build regulations for your country or region when considering this product.

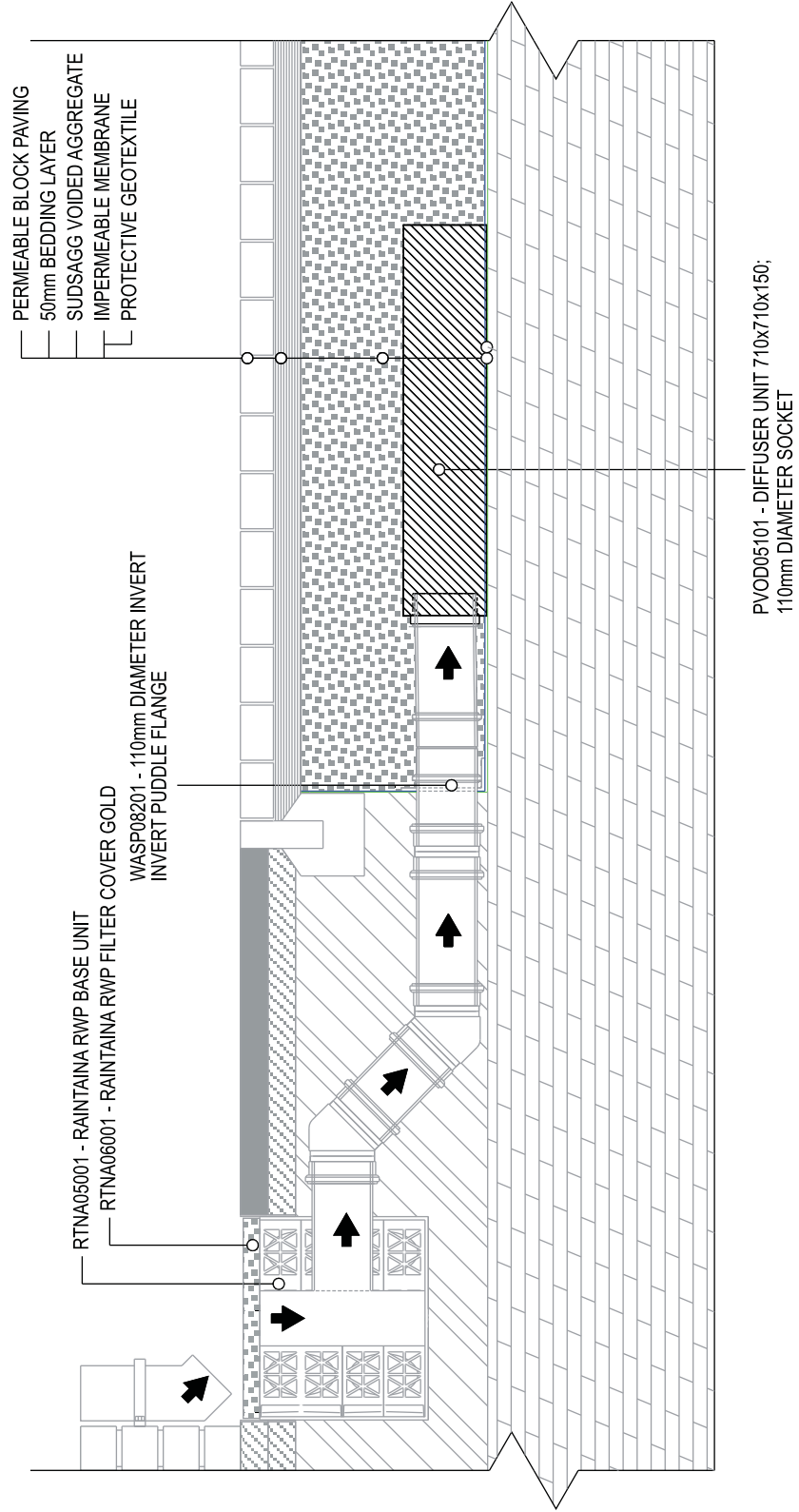
## PVOD05101 - DIFFUSER UNIT 710x710x150; 110mm DIAMETER SOCKET

APPLICATION 1 - DIFFUSING INBOUND FLOWS FROM RAINWATER PIPES TO SOAKAWAY



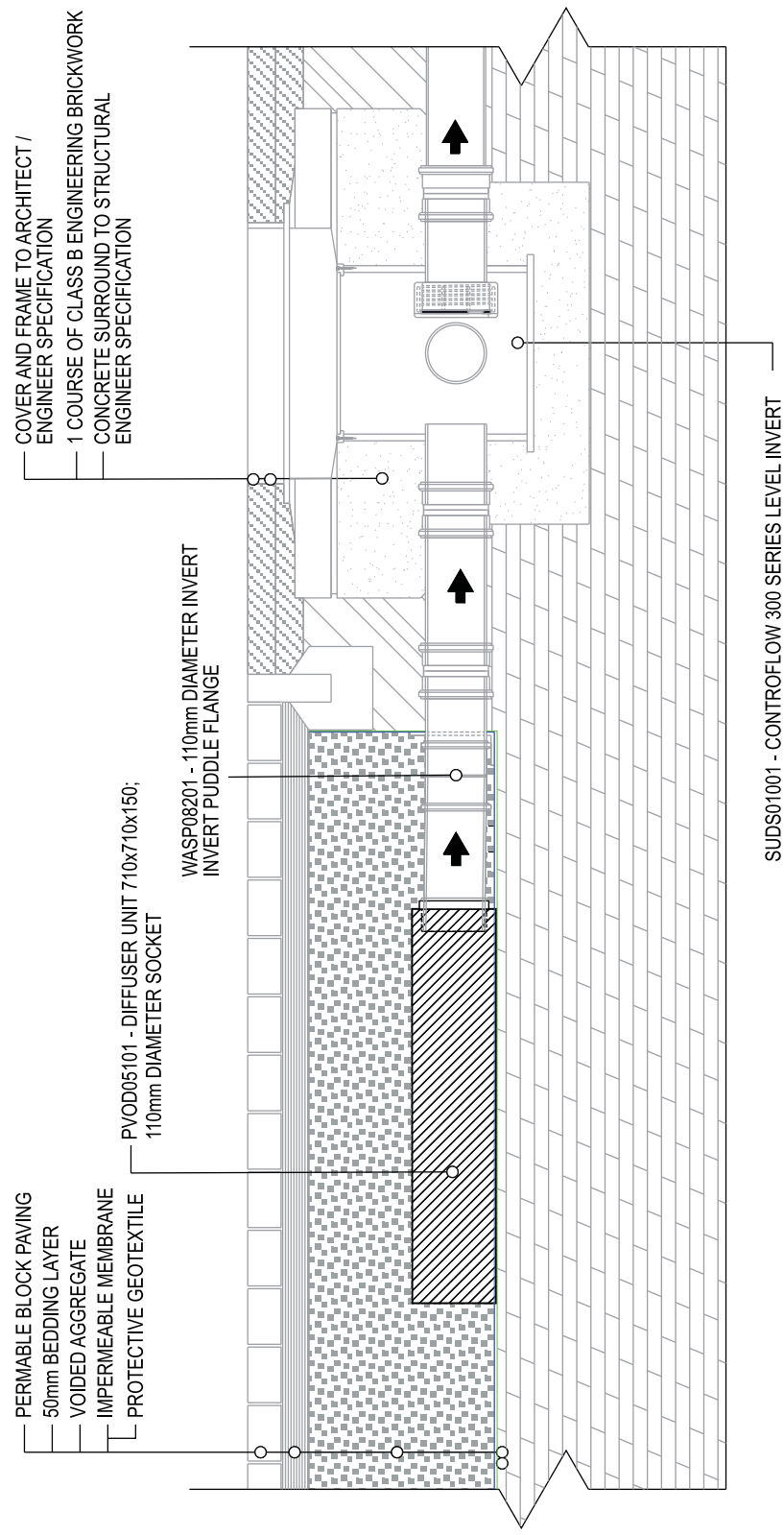
# PVOD05101 - DIFFUSER UNIT 710x710x150; 110mm DIAMETER SOCKET

## APPLICATION 2 - DIFFUSING INBOUND FLOWS FROM RAINWATER PIPES TO PERMEABLE PAVING SYSTEM



# PVOD05101 - DIFFUSER UNIT 710x710x150; 110mm DIAMETER SOCKET

## APPLICATION 3 - FILTERING OUTBOUND FLOWS FROM PERMABLE PAVING TO FLOW CONTROL



## Pipe Connection Kit

PVOD06101

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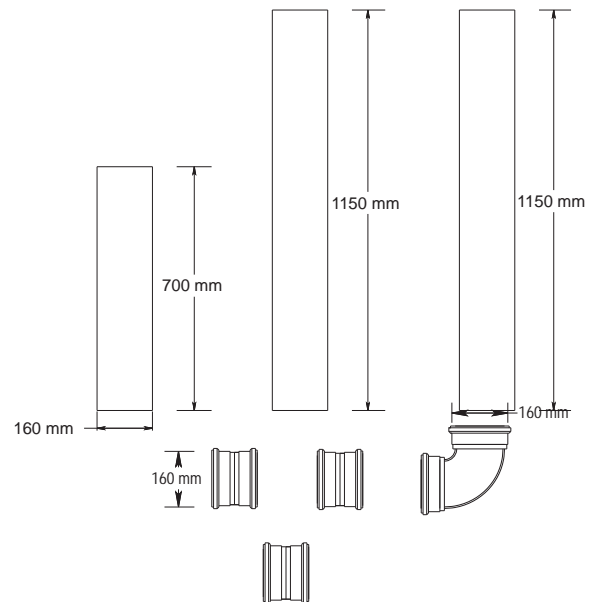
### Description

The 160 ø Pipe Connection Kit is a complimentary addition to other 160mm ø PVOD products. A purpose made kit that contains 3 lengths of pipe (2 x 1.15m long and 1 x 0.70m long), giving 3m of pipework in total, three push-fit pipe couplings, and a 90° double socket bend. Designed to save time on site and reduce costs, this product is an ideal kit that provides all the components required for connecting the 160mm ø range of Permavoid inlets/outlets to a 160mm ø Permavoid chamber spigot.



### Packaging Details

Element	Value	Unit
Packaging unit type	Double wall cardboard	
Packaging unit dimension	400 x 400 x 1172 (LxWxD)	mm
Packaging unit weight	7.93	kg
Number of units per pallet	12	nr
Pallet dimensions	1200 x 1200 x 150 (LxWxD)	mm
Pallet weight	120.16	kg



### Specification

Element	Value	Unit
Pipework diameter	160	mm
Pipework overall length	3	m
Overall weight	6.5	kg
Couplings	3	unit(s)
90° double socket bend	1	unit(s)
Pipe lubricant	1	unit(s)

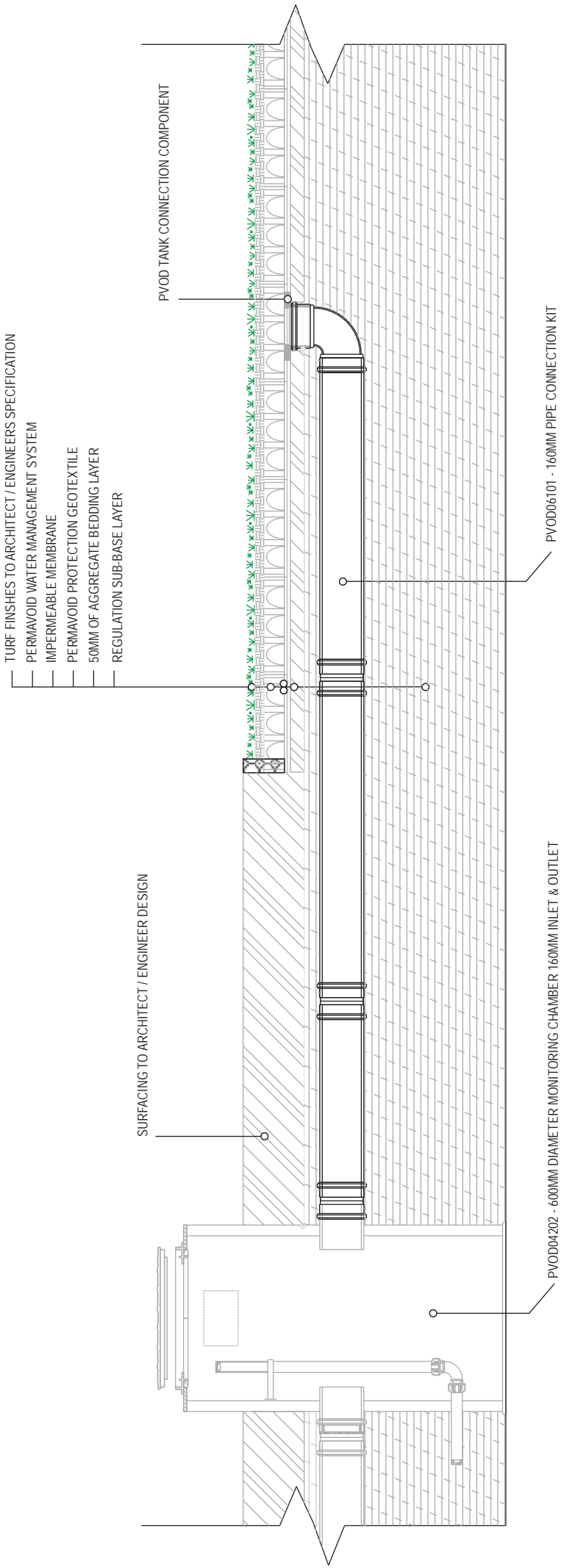
Purpose made kit

Saves time on site

Compatible with other PVOD components



PVOD06101 - 160mm DIAMETER PIPE CONNECTION KIT



# PERMAVOID COMPONENTS

## Specifications and Applications

- Residential areas
- Industrial estates
- Car parks
- Sports pitches
- Blue / Green Roofs
- Basements
- Pedestrian areas
- Podium decks
- Rainwater harvesting
- Equestrian



## Version 4

*Due to continuous product development, products, materials and specifications may vary from this brochure. Interested parties may visit the Permavoid website for any product enquiries. Copyright © Permavoid Limited. All rights reserved.*