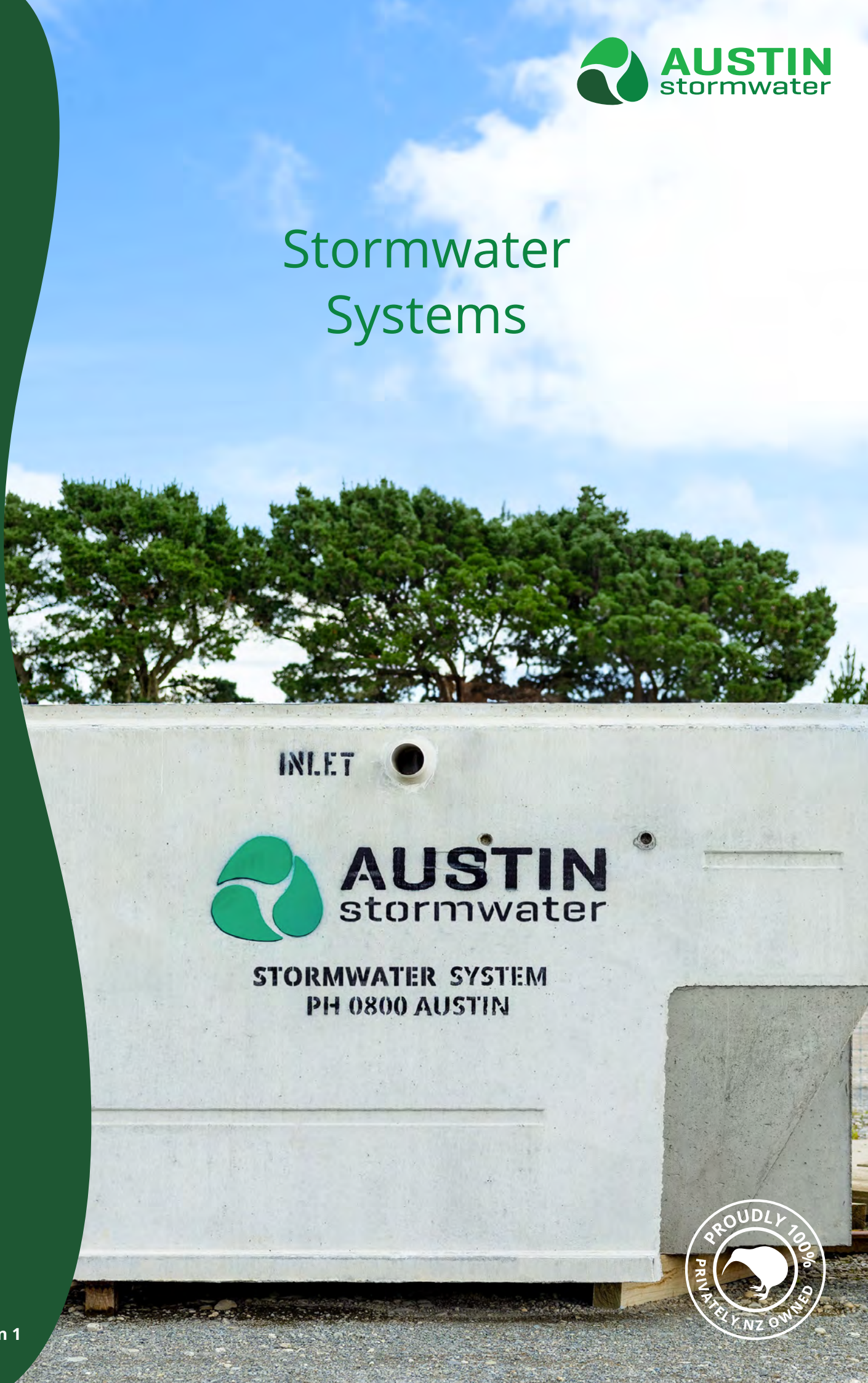
AUSTIN stormwater

Stormwater Systems



Version 1


PROUDLY 100%
PRIVATELY NZ OWNED

Contents

Austin Stormwater, a division of Austin Bluewater Environmental Concepts Ltd
20 Illinois Drive, Rolleston 7614
PO Box 16865, Hornby, Christchurch 8441
P 0800 287 846 or 03 595 2812
E office@austinbluewater.co.nz
www.austinbluewater.co.nz


HIAB
XS
AUSTIN
stormwater
STORMWATER SYSTEM
PH 0800 AUSTIN
C&C
ENGINEERING

Company Profile & Values

Austin Stormwater is a division of Austin Bluewater, a proven leader with over 30 years hands-on experience designing and manufacturing wastewater treatment and septic systems.

Austin Bluewater Environmental Concepts Limited is a leading manufacturer of specialised wastewater products including treatment systems, septic tanks, water storage tanks, pump stations, grease traps and oil & grit interceptors. Our company's founder and director Lew Austin, is the innovator of Aerobic Wastewater Treatment Systems in New Zealand and still plays an active role in the direction and supervision of the business.

As a business we actively seek to develop, improve and refine all aspects of our products and our manufacturing processes. Our respect and care for the environment is our motivation to continue to develop and enhance the treatment of wastewater.

System Principles

Austin Bluewater treatment systems are designed and manufactured with care and foresight. The quality durable materials and components used in the manufacturing of the treatment plants are an indication of the commitment to sustainability and performance of these systems.

Warranty

Austin Bluewater offers a 10 year limited manufacturer's warranty on all concrete manufactured product and a 2 year warranty of mechanical parts and electrical components.

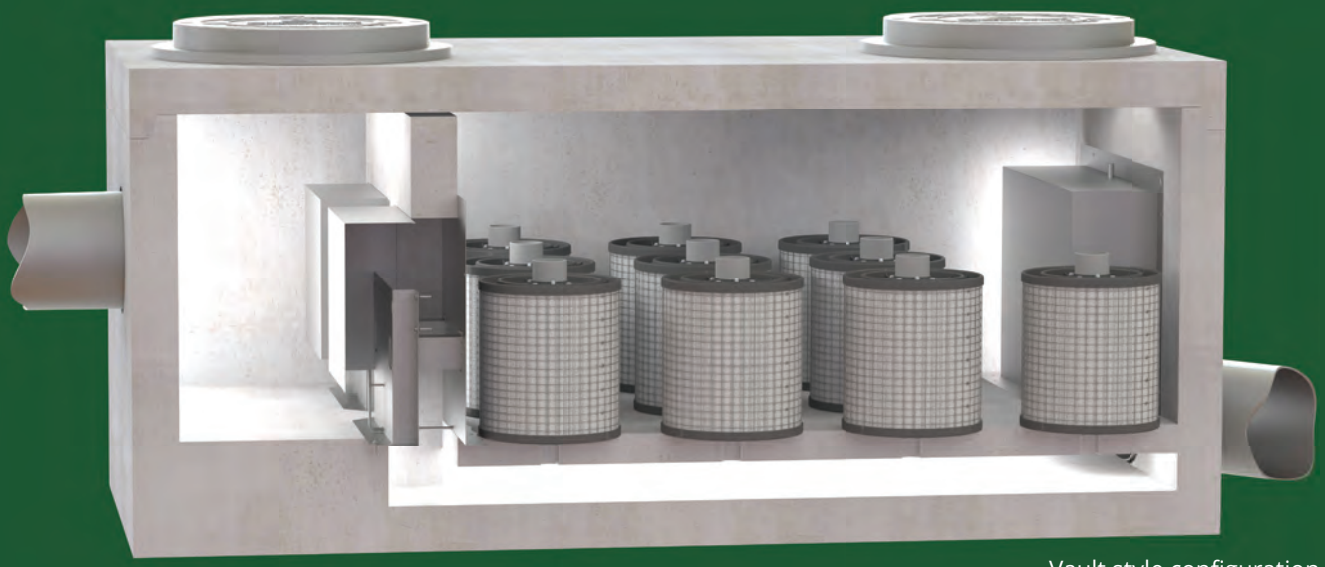
Please refer to our full warranty statement for more details.

Austin Bluewater Limited's quality management system is certified to ISO9001:2016 and is regularly reviewed for compliance by Telarc, New Zealand's most recognised and longest established certification body.

PerkFilter™ Media Filtration

AUSTIN stormwater

Cartridge filtration proven to remove and retain the toughest pollutants from stormwater runoff.



Vault style configuration

Flexible Configurations

Available in vaults, manholes and catch basins with variable inlet/outlet locations.

Integral Pretreatment

Pretreatment chamber prolongs media lifespan by removing gross pollutants.

Superior Flow Rates

High efficiency treatment in a compact footprint.

Field and Laboratory Tested

High TSS and phosphorus removal rates.

Modular Cartridge Construction

Simple design provides for efficient media replacement and cartridge handling.

Internal High Flow Bypass

Integrated bypass system reduces construction costs by eliminating the need for a separate bypass structure.

in conjunction with

Oldcastle Infrastructure™
A CRH COMPANY

System Overview

Captures and retains suspended soils, metals, nutrients, petroleum hydrocarbons, and other target constituents from stormwater runoff to significantly reduce the total pollutant discharge load.

Performance

PerkFilter's designs have been extensively field tested, resulting in removal efficiencies of:

- Total Suspended Solids > 80%
- Total Phosphorus > 60%

Application

PerkFilter is available in a wide variety of configurations to meet site specific requirements. Examples include:

- Catch Basins
- Manholes
- Vaults

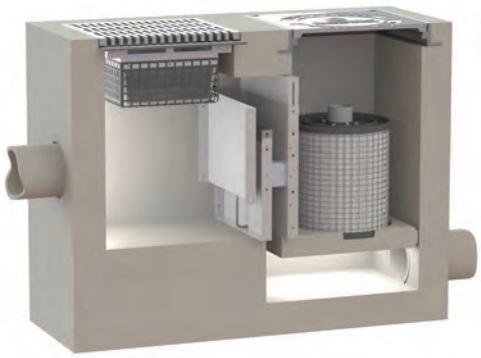
Typical installation locations include:

- In-line storm drain
- New drop inlets of vaults in commercial or residential developments
- Industrial applications
- Pre- or post-treatment for retention/detention systems
- Large custom vaults for regional treatment systems

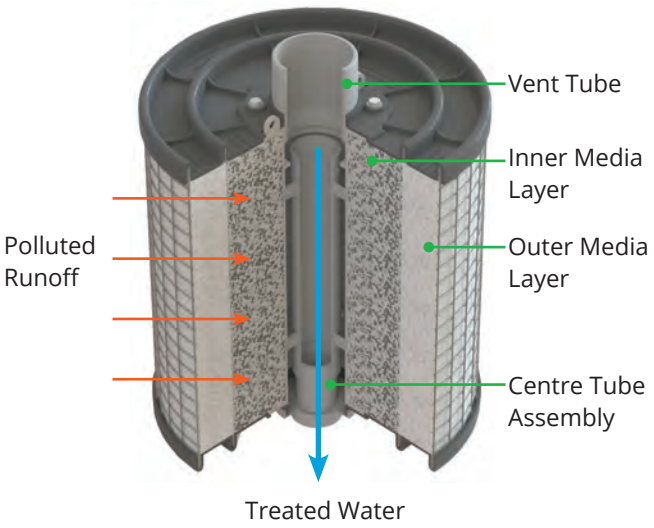
Standard Cartridge Capacities

Cartridge Height (inches)	*Treatment Capacity (gpm) at Media Surface Loading Rate of:*	
	1.5 gpm/ft²	2.5 gpm/ft²
12	6.8	12
18	10.2	18
24	13.6	24
30	17	30

Precast Concrete Manhole



Precast Concrete Catch Basin



Approved Standards

NZS3109 Concrete Construction

Christchurch City Council - Approved for private sites.

Washington State Department of Ecology TAPE/GULD for basic treatment (TSS) and phosphorus treatment.

NJCAT certified 80% TSS removal rate.

See schematic drawing on page 16

Sand Filter Stormwater Treatment

AUSTIN stormwater

Capture pollutants from stormwater runoff

Modular Construction

Separate base, risers and lids, and sturdy watertight design.

Flexible Design

Available in round and rectangular and multiple sizes to meet your site-specific requirements.

System Overview

Austin Stormwater Vaults are a technical solution for sand filtration from stormwater runoff.

Our unique stormwater separating and filtration products are ideal for runoff from high density urban and industrial developments.

The sand filtration process collects a range of pollutants, including oils, nutrients, sediments and heavy metals.

In the storm water management market, precast sand traps are the answer to unique filtering requirements. Precast sand traps, also known as sand filters, capture sediments from runoff water, solve particle separation problems, and lower phosphate levels.

These vaults contain two chambers, one for filtering large debris and particulates and another that contains the sand to filter contaminants from the water itself, including emulsified liquids. The sand filter is typically situated between a collection structure and water piping. Each filter can be sized to match your application, thereby making processing and maintaining more efficient. Austin Stormwater sand filters are available in a variety of sizes and feature a high-flow bypass to comply with underground structure requirements.

Efficacy

Sand filters typically remove up to:

- 80% TSS
- 50% Nutrients
- 50% Metals
- 40% Pathogens

Maintenance

If too much sediment is present in the runoff, the filter will block quicker. The sand should be monitored every 2 months to check if the top surface is crusting over with fine sediments. The top 25-50mm of sand should be removed twice a year and the settling chamber should be emptied once a year.

Approved Standards

NZS3109 Concrete Construction

Concrete Stormwater Detention Tanks

AUSTIN stormwater

Modular Construction

Separate base, risers and lids, and sturdy watertight design.

Flexible Design

Available in round and rectangular and multiple sizes to meet your site-specific requirements.

Overview

Our holding and storage tanks are specifically designed and manufactured for multiple purposes including water storage, wastewater collection, fire fighting protection, industrial use and stormwater detention.

Tanks are designed to be installed above or below ground.

They are designed to withstand fire, rust and algae growth

Concrete storage tanks are impervious to damaging ultraviolet sun rays, and are non-toxic providing a cool, dark environment for water storage.

Get in touch with our sales team today and they can talk you through your options specifically suited to your needs.

Construction

Conforming to AS/NZS 1546.1:2008, Austin Stormwater concrete tanks and lids are manufactured using 45mpa concrete strength with 665 reinforcing mesh for strength and durability. The lid is separate, recessed and sealed to the tank. All internal walls are integral as the tank is of monolithic poured construction (in one piece). The product is externally vibrated during the pouring process (note no fibre is used in our process). This manufacturing process eliminates any leakage caused by any movement of interim walls, common in other processes.

Concrete

Austin Stormwater's concrete is a certified structural ready mixed concrete design complying to NZS3104, relating to special grades, plant and testing.

The final result is 45mpa strength at 28 days curing. Each tank is steam cured in order to gain early structural strength integrity.

Steel Mesh

Steel reinforcement mesh consists of 665 mesh centrally located in accordance with AS/NZS 1546 and is supported with plastic bar chairs. All mesh overlaps at a rate of 2x per mesh pitch.

Product Range

Stormwater Detention Tanks

80mm lid as standard. Comes with 100mm inlet and overflow. Polylok screw down lid as standard.

Model SW65

6,500 litre stormwater detention tank with standard lid

Model SW10 (Circular)

10,000 litre stormwater detention tank with standard lid

Model SW20 (Circular)

20,000 litre stormwater detention tank with standard lid

Stormwater Detention Tanks - Heavy Duty Lid

Heavy duty lid for extra fill cover, non trafficable. Excludes cast ironware. Comes with 100mm inlet and overflow.

Model SW65 HD

6,500 litre stormwater detention tank with heavy duty lid

Model SW10 HD

10,000 litre stormwater detention tank with heavy duty lid

Model SW20 HD

20,000 litre stormwater detention tank with heavy duty lid

Application

For detention and slow release, commonly required on hillside properties.

Approved Standards

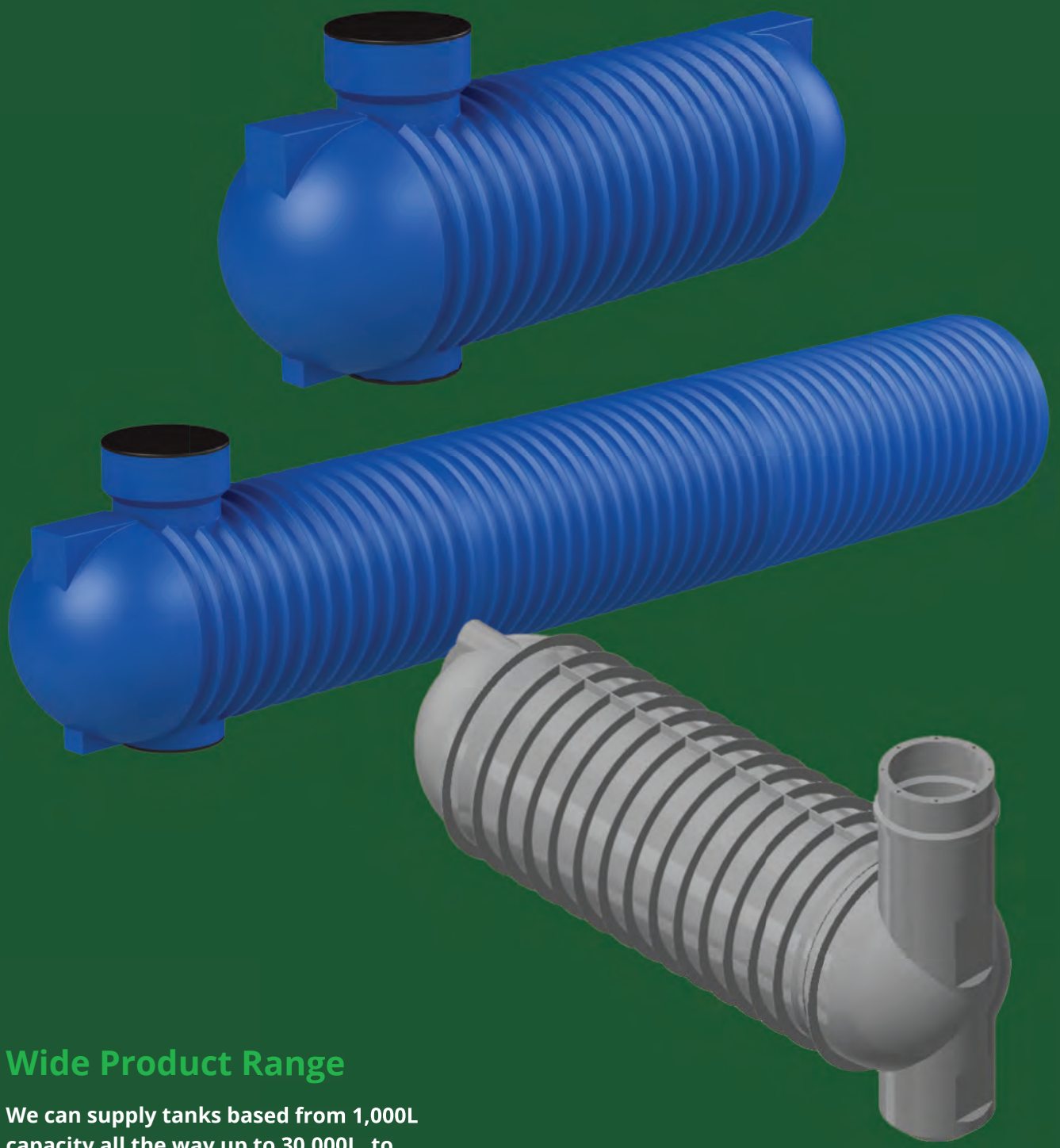
NZS3109 Concrete Construction

AS/NZS 1546.2008

See schematic drawing on page 17

Polyethylene Stormwater Detention Tanks

AUSTIN stormwater



Wide Product Range

We can supply tanks based from 1,000L capacity all the way up to 30,000L, to meet your site-specific requirements.

Overview

Polyethylene underground stormwater tanks are suitable alternative to concrete tanks, for the retention or detention of stormwater or as a pump chamber.

The poly (plastic) detention tanks are fully tested and designed to withstand ground and water pressure at depth.

Application

The tanks have been designed to be flexible for the majority of New Zealand's soil types and water table conditions.

They have been built to be easily installed under your lawn or concrete depending on the needs of your site. The tank is not reliant on surrounding soil structures for strength.

- Stormwater retention, detention
- Suitable to be installed under driveways, footpaths, car parks, forecourts and much more
- Lightweight and easy to manoeuvre on difficult sites
- Save time and money with multiple inlet/outlet plumbing ports
- Vehicular Traffic Tested
- Non Vehicular Traffic - Tanks in non-critical areas can be placed at any depth that is required

See schematic drawing on page 18

Stormwater Pumping Stations

Modular Construction

Separate base, risers and lids, and sturdy watertight design.

Flexible Design

Available in round and rectangular and multiple sizes to meet your site-specific requirements.

Overview

Austin Stormwater supply, design and build a large range of pump units and packaged pump stations for your stormwater requirements. Pump Stations are available in both concrete (strength and durability) and polyethylene (lightweight for ease of transport and install).

Get in touch with our sales team today and they can talk you through your options specifically suited to your needs.

Construction

Conforming to AS/NZS 1546.1:2008, Austin Stormwater concrete tanks and lids are manufactured using 45mpa concrete strength with 665 reinforcing mesh for strength and durability. The lid is separate, recessed and sealed to the tank. All internal walls are integral as the tank is of monolithic poured construction (in one piece). The product is externally vibrated during the pouring process (note no fibre is used in our process). This manufacturing process eliminates any leakage caused by any movement of interim walls, common in other processes.

Concrete

Austin Stormwater's concrete is a certified structural ready mixed concrete design complying to NZS3104, relating to special grades, plant and testing.

The final result is 45mpa strength at 28 days curing. Each tank is steam cured in order to gain early structural strength integrity.

Steel Mesh

Steel reinforcement mesh consists of 665 mesh centrally located in accordance with AS/NZS 1546 and is supported with plastic bar chairs. All mesh overlaps at a rate of 2x per mesh pitch.

Product Range

Pump Chambers

Model PCC1500 Austin Concrete Pump Chamber

With concrete lid as standard. 100mm inlet. No pump included

Model PCP1300 Austin Polyethylene Pump Chamber

With polyethylene lid fitted & 100mm inlet. No pump included

Model PCC1500 HD Austin Concrete Pump Chamber

With engineered trafficable lid, 100mm inlet, no pump included. Excludes cast ironware

Pump Stations – Vortex or Macerating Type Pump

Austin Pump Station – Vortex (Concrete)

1,500 litre concrete pump chamber fitted with DAB-BVP750MA, single phase vortex pump, max particle size 38mm. 50mm delivery pipework with cast iron ball non return valve, high level float switch and Advance Pump Controller mounted on post

Austin Pump Station – Vortex (Polyethylene)

1,300 litre polyethylene pump chamber fitted with DAB-BVP750MA, single phase vortex pump, max particle size 38mm. 50mm delivery pipework with cast iron ball non return valve, high level float switch and Advance Pump Controller mounted on post

Austin Pump Station – Macerating (Concrete)

1,500 litre concrete pump chamber fitted with Blueline GDH15, single phase solids handling macerating pump. Delivery pipe work with cast iron ball non return valve, high level float switch and Advance pump controller mounted on post

Austin Pump Station – Macerating (Polyethylene)

1,300 litre polyethylene pump chamber fitted with Blueline GDH15, single phase solids handling macerating pump. Delivery pipe work with cast iron ball non return valve, high level float switch and Advance pump controller mounted on post

Other pumps available, depending on application. Talk to our technical team for pump suitability.

Approved Standards

NZS3109 Concrete Construction

AS/NZS 1546.2008 and AS/NZS 1547.2012

See schematic drawing on page 19

Oil & Grit Interceptors

AUSTIN stormwater

Technical solution for separating oil and grit from stormwater runoff

Overview

Oil and grit interceptors are an effective and simple solution to separate and store grits and all types of oils from lightly contaminated storm water and wash-down water. They are required for the separation of heavy solids (sand & grit) and floating hydrocarbons from storm water or wash down areas. They are typically used in industrial and commercial applications where there is potential risk for contamination from hydrocarbon products into waterways.

The multi chambered treatment tank is installed close to the collection point (to ensure the oil reaches the interceptor before it emulsifies or pollutes the area) allowing for the storm water / wash down water to flow into the settlement chambers prior to entering a storm water lateral or disposal system.

The Austin Stormwater Oil & Grit Interceptor is not recommended to be used in applications where large spills of hydrocarbon based materials are a possibility. Please seek professional advice or ensure a suitable engineered solution is provided for large scale applications.

Suitable Applications

The Austin Stormwater Oil & Grit Interceptor can be used in the following applications:

- Driveways
- Loading bays
- Small sealed carparks
- Commercial carwash facilities
- Wash down bays
- Depots or terminals
- Pre-treatment to a retention tank or pond
- Industrial yards

Features

- Multi-chambered tank design - engineered for effective grit and oil separation
- Watertight construction of tank preventing water ingress
- Manufactured using steel reinforced 45mpa commercial strength concrete
- Robust design for commercial applications
- Swift lift anchors to ensure easy manoeuvrability and cartage
- Option to customise design to suit the application including engineers PS1 for loading design.
- Options for cast iron manhole covers
- Customised options for inlet and outlet pipework
- Engineered designs for heavy duty trafficable lids

Product Range

Oil & Grit Interceptors

Model OG15

1,500 litre tank fitted with division wall

Model OG33

3,300 litre tank fitted with 3 compartments

Model OG65

6,500 litre tank fitted with 3 compartments

Oil & Grit Interceptors - Heavy Duty Lid

Model OG15 HD

1,500 litre tank fitted with division wall

Model OG33 HD

3,300 litre tank fitted with 3 compartments

Model OG65 HD

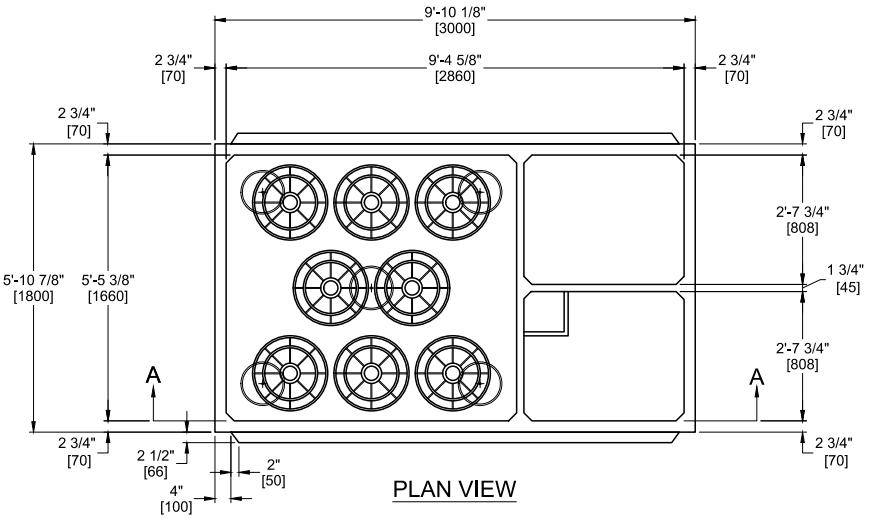
6,500 litre tank fitted with 3 compartments

Approved Standards

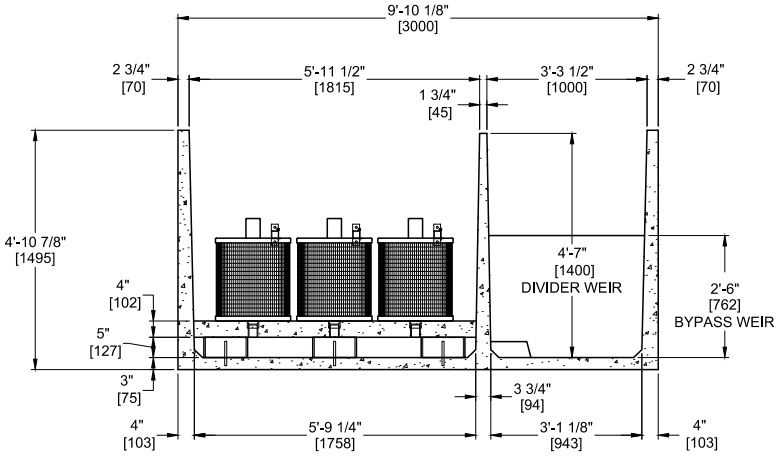
NZS3109 Concrete Construction

AS/NZS 1546.2008

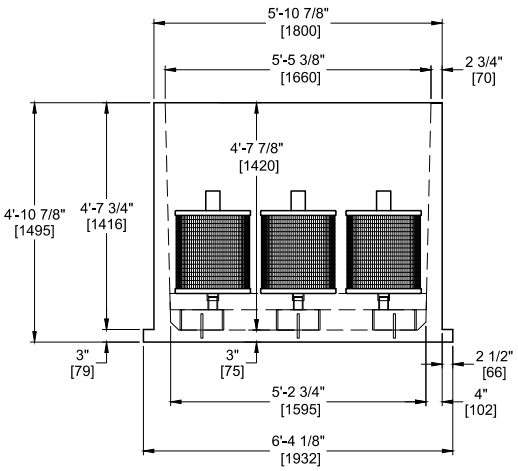
PerkFilter™ Media Filtration



PLAN VIEW



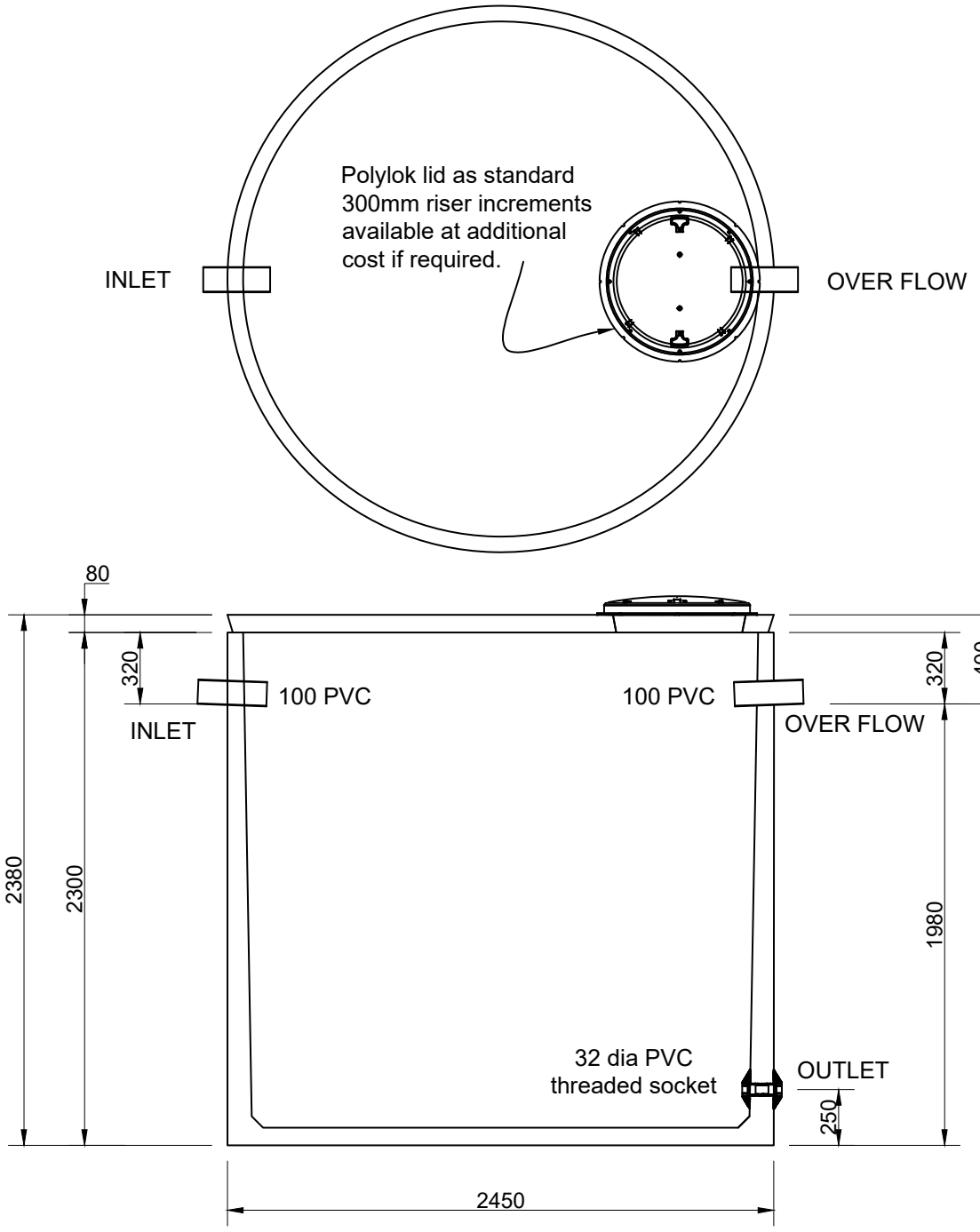
SECTION A-A



LEFT END VIEW

Example
Perk Filter with 18 Cartridges, 8 Each. ABW B52 (NTS)

Concrete Stormwater Detention Tank



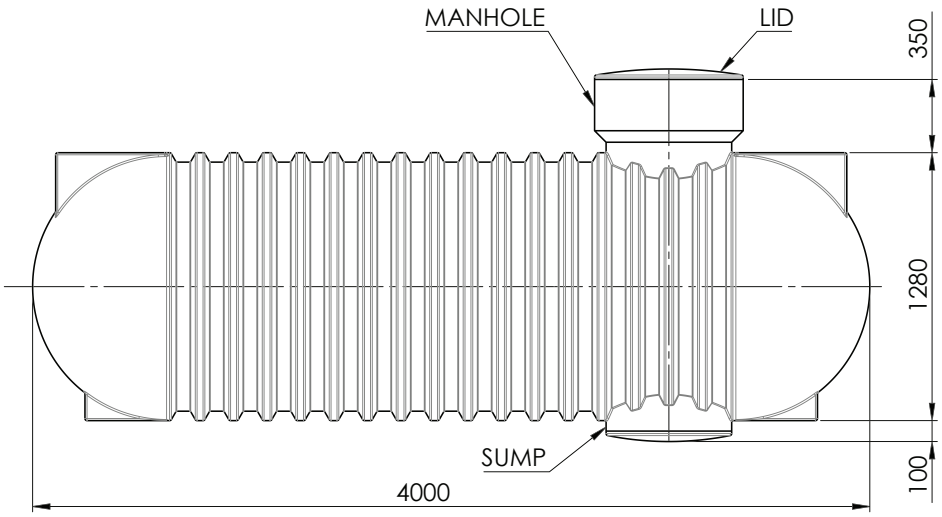
Lid thickness standard at 80mm. Recommended maximum loose soil cover depth - 400mm

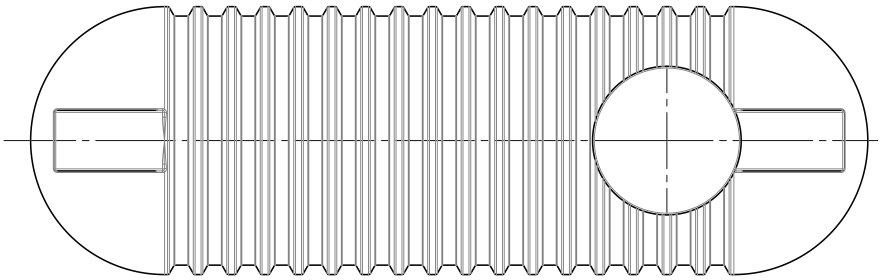
Light Trafficable / heavy duty lids are available to order. Contact Austin Bluewater technical department.

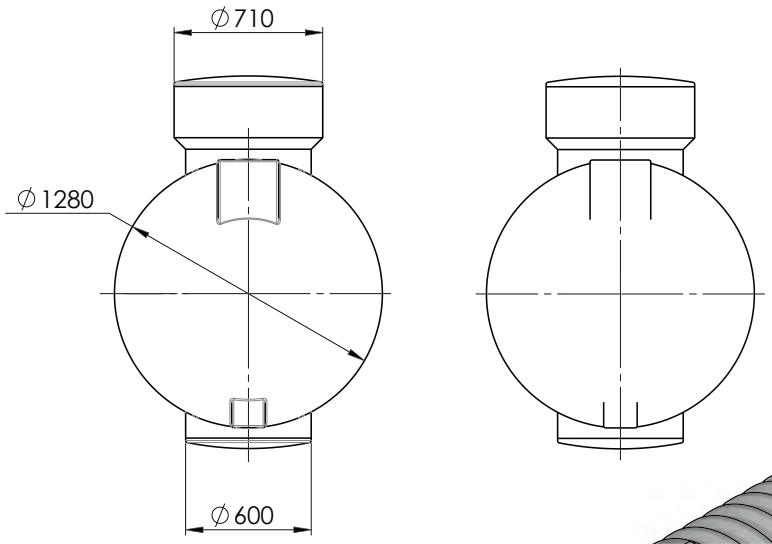
TANK Weight - including 80 mm lid = 5.4 tonne
Lifting - 4 number Reid 2.5 t eye anchors When handling an equalising beam must be used to ensure equal loading to all lifting anchors

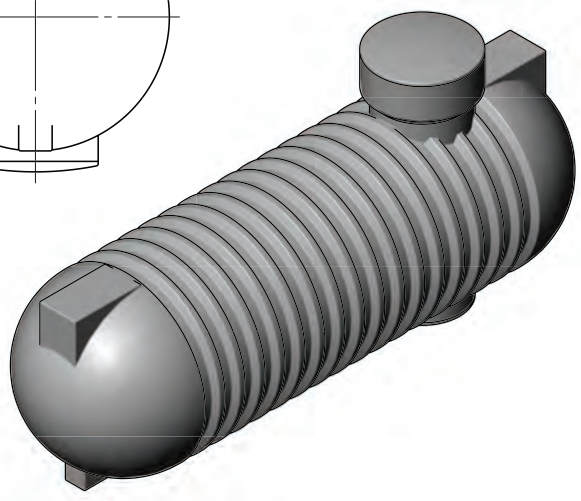
Example
Austin Stormwater SW10 Stormwater Detention Tank 10,000L (NTS)

Polyethylene Stormwater Detention Tank



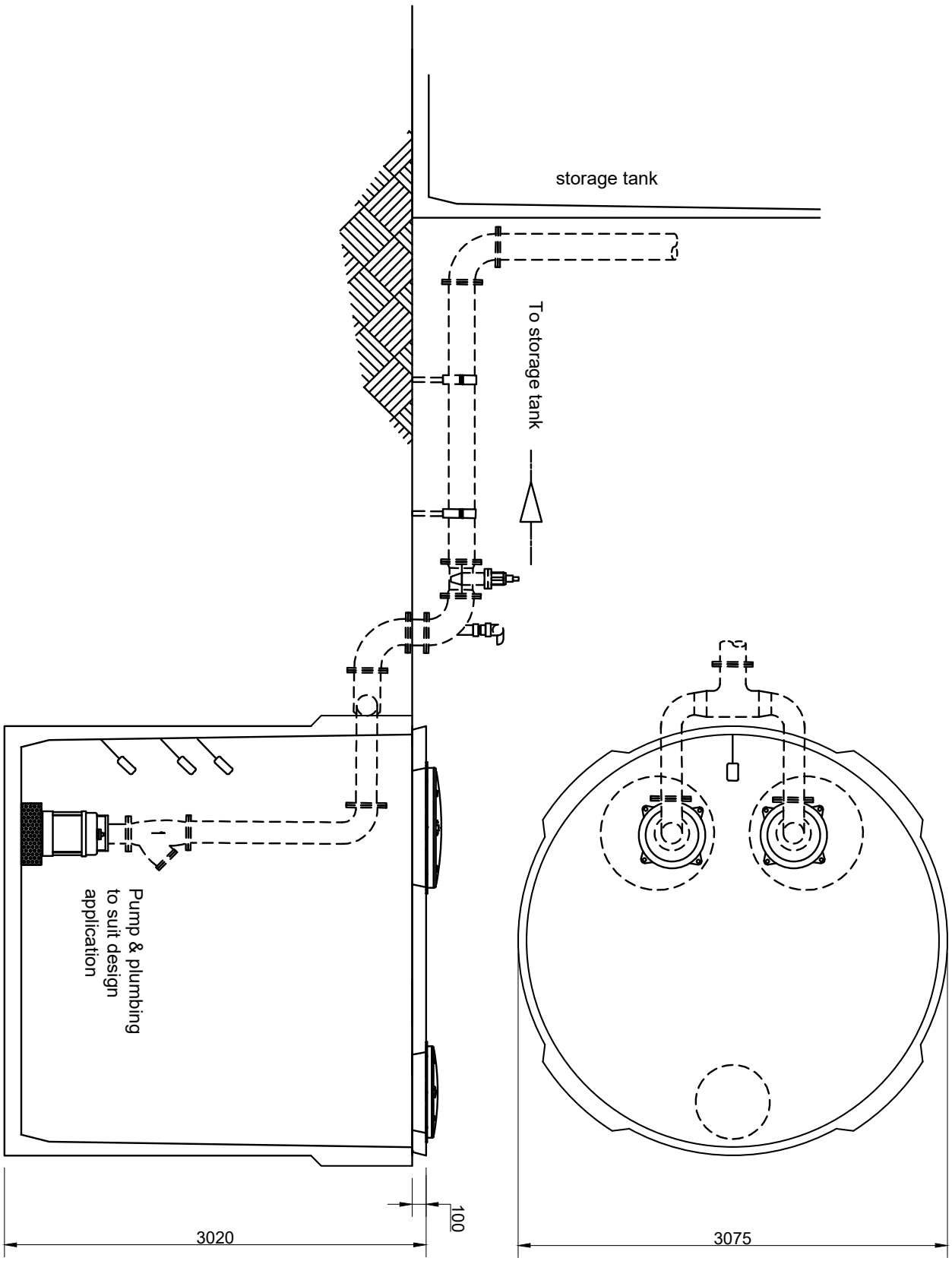






Example
Polyethylene 4000L Underground Tank (NTS)

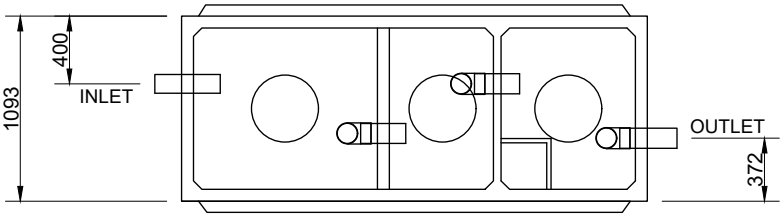
Stormwater Pumping Station

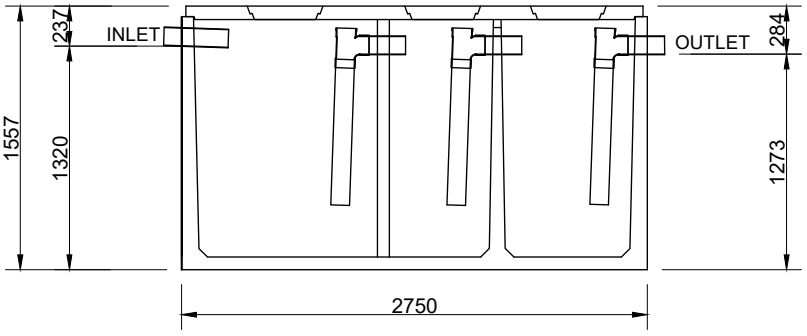


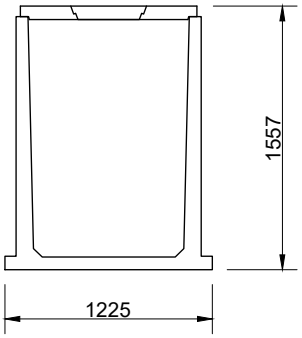
Example

Austin Stormwater - T20PC 20,000L Stormwater Pump Chamber (NTS)

Oil and Grit Interceptor







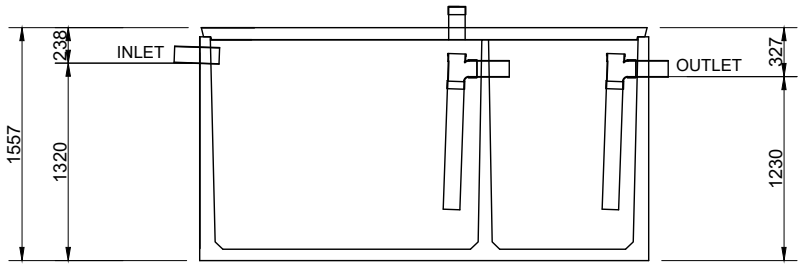
Lid thickness standard at 80mm. Recommended maximum loose soil cover depth - 400mm

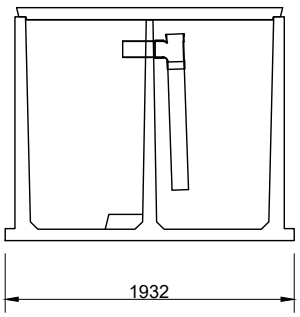
Light Trafficable / heavy duty lids are available to order. Contact Austin Bluewater technical department.

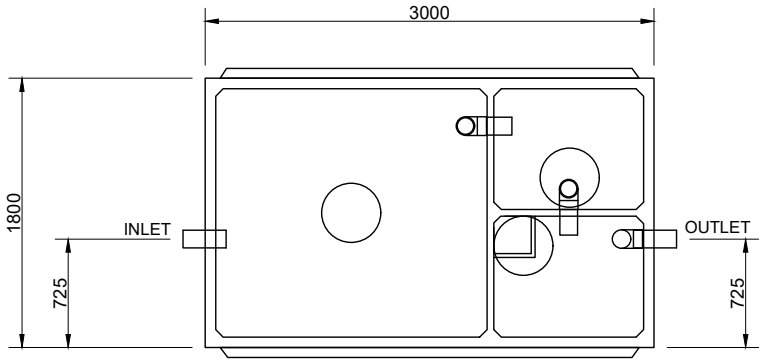
TANK Weight - including 80 mm lid = 3.9 tonne
Lifting - 4 number Reid 2.5 t eye anchors
Equalising beam must be used to ensure equal loading to all lifting anchors

Unit supplied with 3 lift out concrete lids as standard.
To extend with turrets use 400 dia Farm Tuff pipe.

Example
Austin Stormwater OG33 Oil & Grit Interceptor 3,300L (NTS)







Unit supplied with 3 lift out concrete lids as standard.
To extend with turrets use 400 dia Farm Tuff pipe.

Lid thickness standard at 80mm. Recommended maximum loose soil cover depth - 400mm

Light Trafficable / heavy duty lids are available to order. Contact Austin Bluewater technical department.

TANK Weight - including 80 mm lid = 5.7 tonne
Lifting - 4 number Reid 2.5 t eye anchors
When handling an equalising beam must be used to ensure equal loading to all lifting anchors

Example
Austin Stormwater OG65 Oil & Grit Interceptor 6,500L (NTS)


SWL 12.5T
AUSTIN
bluev
0800 AUSTIN
PBSLR16122
AUSTIN
stormwater
STORMWATER SYSTEM
PH 0800 AUSTIN


OUTLET
AUSTIN
stormwater
STORMWATER SYSTEM
PH 0800 AUSTIN
AUSTIN
stormwater
STORMWATER SYSTEM
PH 0800 AUSTIN


INLET
AUSTIN
stormwater
STORMWATER SYSTEM
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