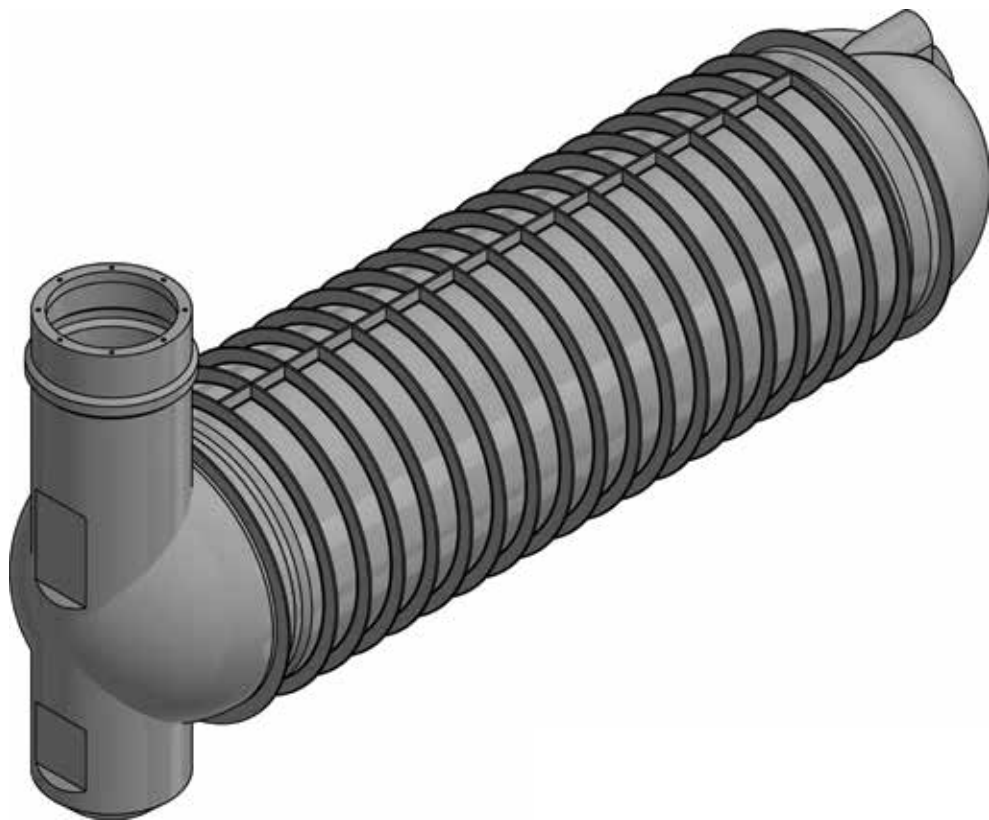


Product Information

Underground Detention/Retention Tanks



*storm***VAULT**
V4

0800 338 268

NI.07 578 8726 | SI.03 344 1065

Contents

Manufactures Specification

Manufactures Producer Statement

stormVAULT volume check method - example

Maintenance Requirements

Product Drawing – 1200 Series

Typical Backfill detail – 1200 Series – Lawn

Typical Backfill detail – 1200 Series – Concrete

Ground Compression Anchor guide - 1200 Series

Ground Compression Anchor Installation - All models

Ground Compression Anchor details - 1200 Series

Plastic Lid Assembly - All Models

Plastic Lid Riser Adjustment - All models

Cast Iron Manway Assembly - All models

Multi Tank connection side by side - All models

100mm Connection kit

Product Photos

Supporting Documents available:

Installation Guide

Home Owner Guide

stormVAULT Brochure

Full installation detail for in lawn and under drive with PS1

Manufacturers Specification

*storm***VAULT** - all models and sizes

Application and Use

For efficient retention, detention, storage and attenuation of rainwater. Retention, detention, storage, and primary treatment of wastewater.

Specifications

- Suitable for all ground types
- Suitable for all water tables (min. backfill & ground anchors required)
- 15 year domestic warranty
- Suitable for under drive installation - domestic and commercial (see installation information)
- Certified material standards: AS/NZS4766:2020, AS/NZS4020:2005, AS/NZS 2070
- Standards designed to achieve: AS/NZS1546.1:2008, ARMA COP15, AS/NZS4766:2020
- Finite Engineering Analysis: Matrix Applied Computing Ltd
- Code Compliance design check: Matrix Applied Computing Ltd
- Installation details and PS1 documentation: Structural Engineers New Zealand Limited (SENZ)

Features and Benefits

- Light weight system
- Simple proven technology
- Solid filled ribs for strength
- Low maintenance requirements

Maintenance

Annual Checks:

- Lids for sealing against storm water infiltration
- Overflow for blockages
- Orifice outlets for blockages
- Leaf guard for blockages
- Silt trap for build-up of silt, sludge or grit



Manufacturers Producer Statement

*storm***VAULT** - all models and sizes

Issued by: Devan Plastics Limited

Warranty:

Devan Plastics Ltd warrants each *storm*VAULT underground water tank to be free of defects in workmanship or materials for a period of 15 years for all tanks installed in a residential application and 10 years for commercial applications. It is this commitment to excellence that makes Devan Plastics Limited the market leader in the field of water storage and wastewater treatment. Please see the installation instructions for further details.

Compliance and Certification:

Design and testing of *storm*VAULT polyethylene tanks has been carried out by Registered Engineers and Consultants in order to comply with AS/NZS1546, ARMA COP15 and relevant sections of AS/NZS 4766.

*storm*VAULT tanks, manufactured by Devan Plastics Limited, in New Zealand from specifically designed Polyethylene that is certified by the manufacturer to be fit for purpose. The base resin used in the manufacturing process is compliant with the food contact requirements of AS/NZS 2070 and drinking (potable) water standard AS/NZS4020:2005.

The polyethylene material used in the manufacture of *storm*VAULT tanks will not degrade, is UV stabilized for New Zealand conditions and it is also resistant to algae growth as a result of its formulation and not from any addition of fungicides.

Volume Check

Volume check

Volume checks are carried out based on calculated volumes from the internal measurements and then confirmed with physical tests. This physical test is carried out by filling the tank with water with the volume recorded with a flow meter.

Specifications

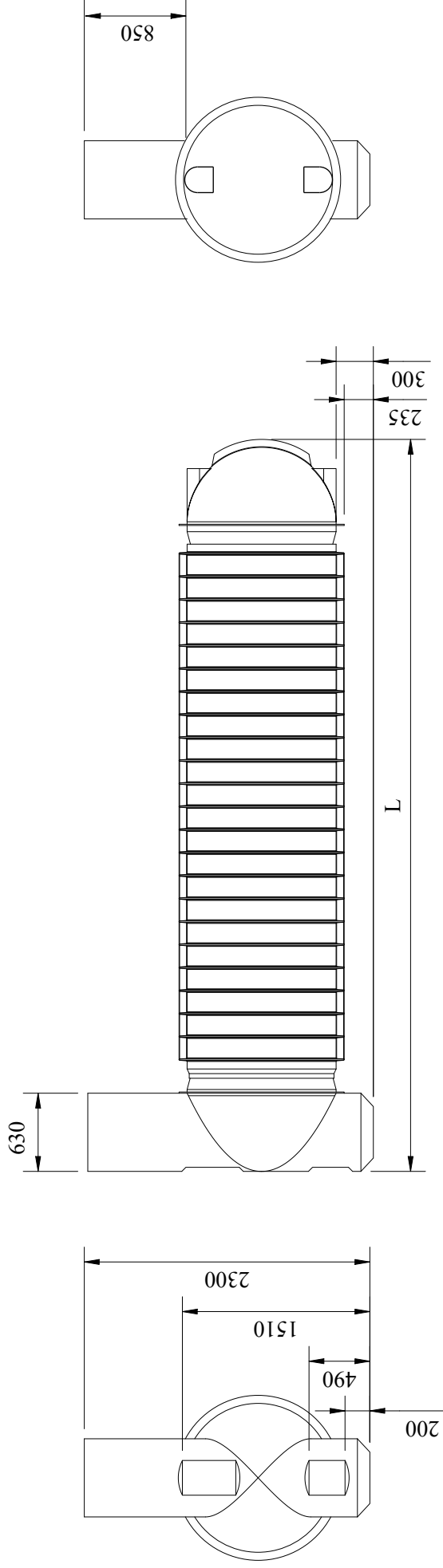
Model:	SVR12-04 - <i>stormVAULT</i> 4,000L
Calculated Volumes:	4,145L to top of culvert section 4,382L total volume inc. riser
Weight:	280kg
Length:	4.1m

Physical test

Date:	02/08/2019
Flowmeter:	ARAD SK11-MI001 +/- 1%
Start reading:	0.778m ³
Reading top of culvert:	4.879m ³
Volume to top of culvert:	4,101L
Reading total volume:	5.115m ³
Volume total inc. riser:	4,337L
Completed by:	Tracy Hutton - Quality Control Officer
Witnessed by:	Alistair Bell - Business Manager

Conclusion

Calculations prove the volume to be greater than 4,000L and is confirmed by the physical test that the working volume of the tank is greater than 4,000L. The physical test exceeds the stated volume even if the variation of the flow meter is considered to be negative for working volume and the total volume of the tank also exceeds the stated 4,000L.

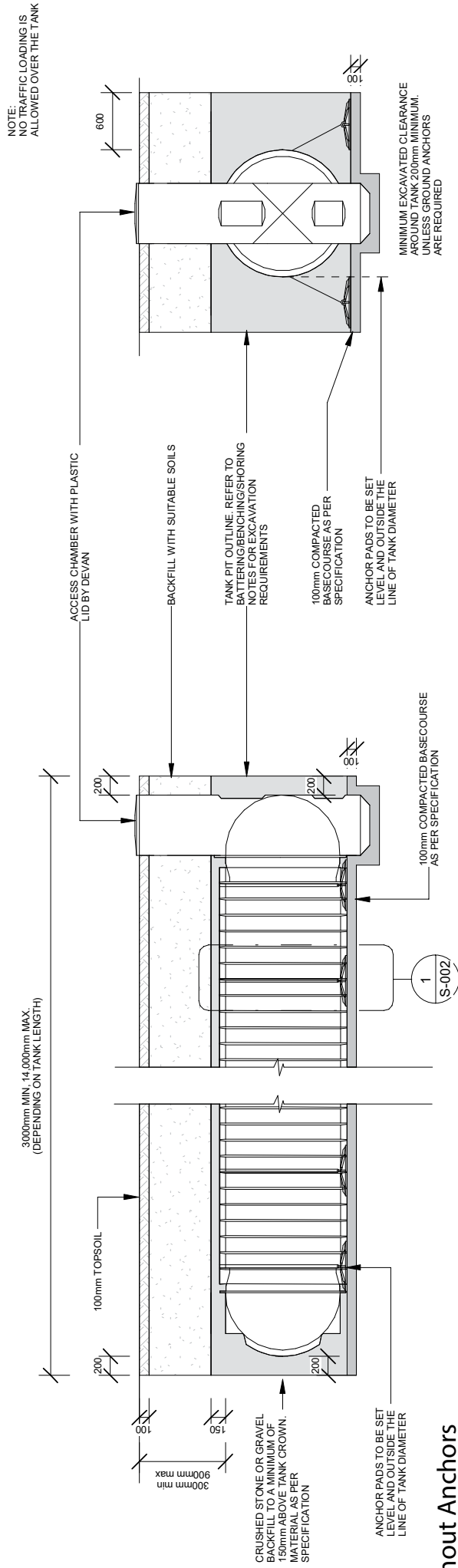


Code	Tank Volume	L *(m)	Weight (kg)	Code	Lid Type
SVR12-01	1,000L	1.46	113	SVALP	stormVAULT Plastic lid
SVR12-015	1,500L	1.91	137	SVALTC	Cast Iron Lid class D - Commercial trafficable
SVR12-02	2,000L	2.25	160	SVALAR	stormVAULT adjustment ring and temporary lid
SVR12-025	2,500L	2.72	192		
SVR12-03	3,000L	3.2	224	Other	
SVR12-035	3,500L	3.68	256	SVGA-12	stormVAULT Ground anchor set - 1200mm
SVR12-04	4,000L	4.15	288	SVAO100	stormVAULT 100mm connection
SVR12-045	4,500L	4.55	314		
SVR12-05	5,000L	5.05	348		
SVR12-055	5,500L	5.5	378		
SVR12-06	6,000L	5.95	409		
SVR12-065	6,500L	6.43	441		
SVR12-07	7,000L	6.9	473		
SVR12-075	7,500L	7.35	503		
SVR12-08	8,000L	7.85	537		
SVR12-085	8,500L	8.3	567		
SVR12-09	9,000L	8.75	597		
SVR12-095	9,500L	9.2	627		
SVR12-10	10,000L	9.65	658		
SVR12-105	10,500L*	10.1	688		
SVR12-11	11,000L*	10.55	718		
SVR12-115	11,500L*	11.05	752		
SVR12-12	12,000L*	11.55	786		
SVR12-125	12,500L*	11.95	813		

* 10,500L and larger incur additional freight
 ** Length can vary up to 100mm longer due to manufacturing process

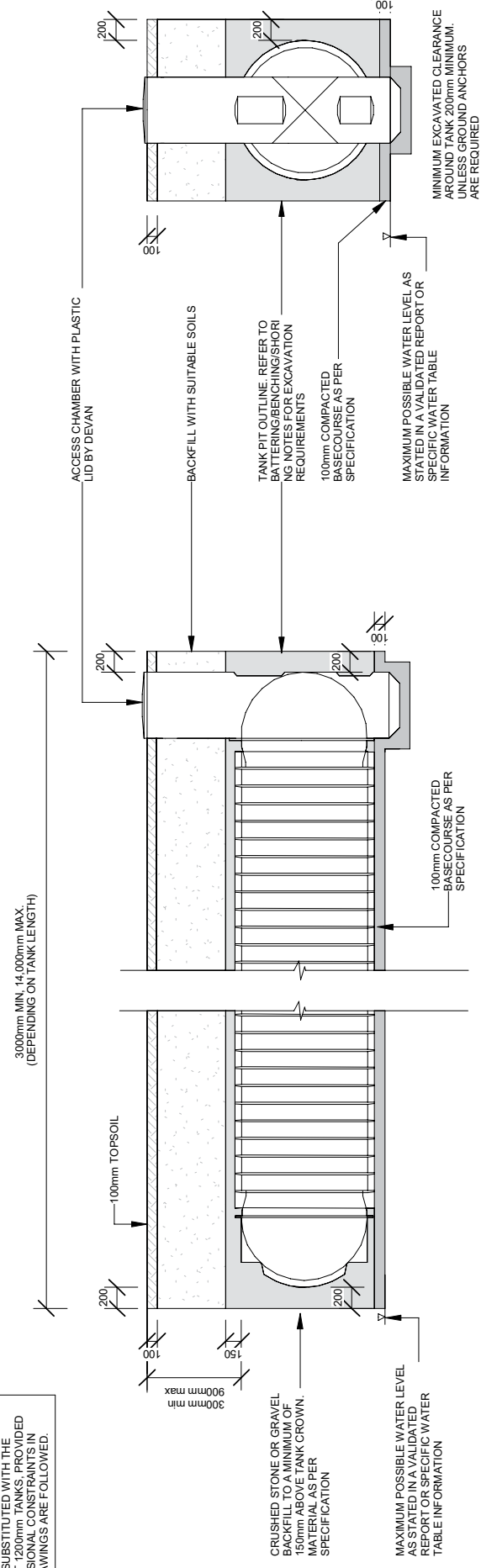
Stub flanges and pipe stubs also available on request

With Anchors



Without Anchors

NOTE:
stormVAULT 800mm TANKS MAY BE DIRECTLY SUBSTITUTED WITH THE stormVAULT 1200mm TANKS. PROVIDED ALL DIMENSIONAL CONSTRAINTS IN THESE DRAWINGS ARE FOLLOWED



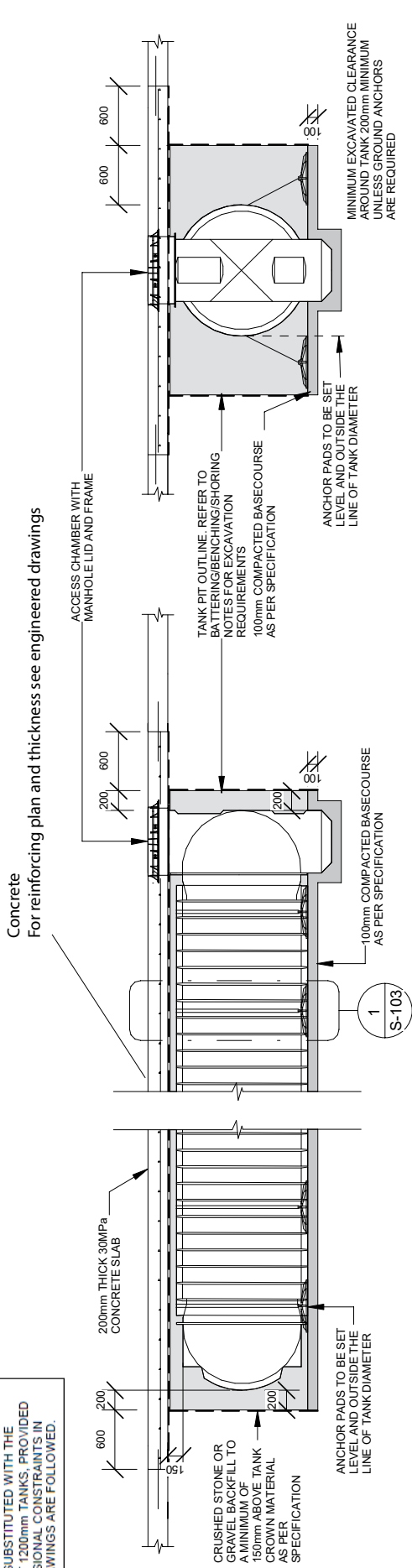
NOTE:
NO TRAFFIC LOADING IS ALLOWED OVER THE TANK

See stormVAULT installation drawings for full details

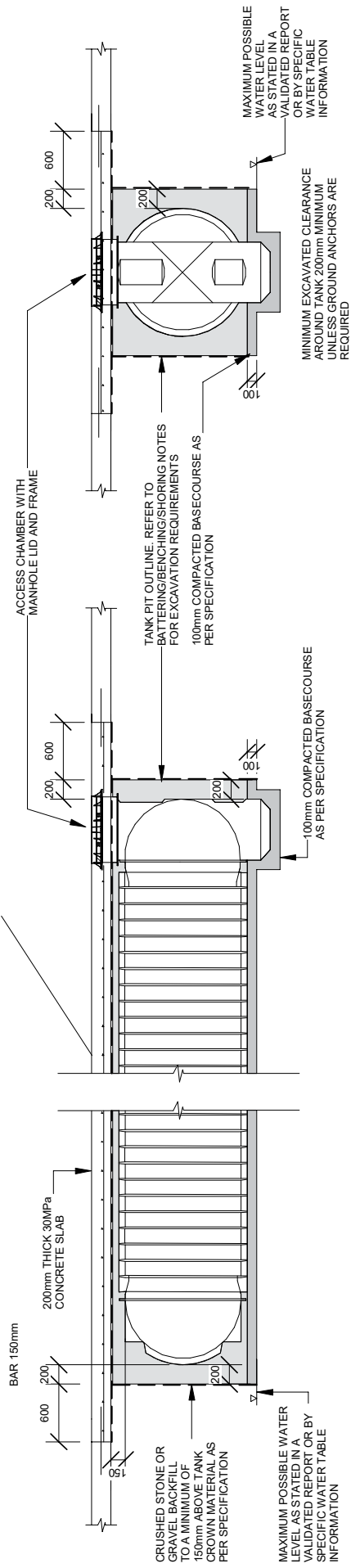
Backfill detail - 1200 Series Typical Lawn installation

With Anchors

NOTE:
stormVAULT 800mm TANKS MAY BE
DIRECTLY SUBSTITUTED WITH THE
stormVAULT 1200mm TANKS, PROVIDED
ALL DIMENSIONAL CONSTRAINTS IN
THESE DRAWINGS ARE FOLLOWED.



Without Anchors



See stormVAULT installation drawings for full details

SIZE Total fill height over body of tank

10m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	7	6	4	6	4	0	4	0	0	0	0	0
0.25	7	6	4	6	4	0	4	0	0	0	0	0
0.50	6	6	4	6	4	0	4	0	0	0	0	0
0.75	4	0	0	4	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

5m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	4	3	3	3	3	0	3	0	0	0	0	0
0.25	4	3	3	3	3	0	3	0	0	0	0	0
0.50	4	3	3	3	3	0	3	0	0	0	0	0
0.75	3	0	0	3	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

9m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	7	5	4	5	4	0	4	0	0	0	0	0
0.25	7	5	4	5	4	0	4	0	0	0	0	0
0.50	5	5	4	5	4	0	4	0	0	0	0	0
0.75	4	0	0	4	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

4m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	4	3	3	3	3	0	3	0	0	0	0	0
0.25	4	3	3	3	3	0	3	0	0	0	0	0
0.50	4	3	3	3	3	0	3	0	0	0	0	0
0.75	3	0	0	3	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

8m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	6	5	4	5	4	0	4	0	0	0	0	0
0.25	6	5	4	5	4	0	4	0	0	0	0	0
0.50	5	5	4	5	4	0	4	0	0	0	0	0
0.75	4	0	0	4	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

3m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	3	2	2	3	2	0	0	0	0	0	0	0
0.25	3	2	2	2	2	0	0	0	0	0	0	0
0.50	3	2	2	2	2	0	0	0	0	0	0	0
0.75	3	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

7m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	5	4	4	4	3	0	4	0	0	0	0	0
0.25	5	4	4	4	3	0	4	0	0	0	0	0
0.50	4	4	3	4	3	0	4	0	0	0	0	0
0.75	3	0	0	3	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

2m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	2	2	2	2	2	0	0	0	0	0	0	0
0.25	2	2	2	2	2	0	0	0	0	0	0	0
0.50	2	2	2	2	2	0	0	0	0	0	0	0
0.75	2	0	0	0	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

SIZE Total fill height over body of tank

6m3	350mm			450mm			550mm			650mm		
	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10	with 0mm GAP10 (soil only)	with 150mm GAP10	with 250mm GAP10
Water Table												
0.00	5	4	4	4	3	0	4	0	0	0	0	0
0.25	5	4	4	4	3	0	4	0	0	0	0	0
0.50	4	4	3	4	3	0	4	0	0	0	0	0
0.75	3	0	0	3	0	0	0	0	0	0	0	0
1.00	0	0	0	0	0	0	0	0	0	0	0	0

Water Table

0.0m	=	Water at surface level
0.25m	=	Water 0.25m below ground level
0.50m	=	Water 0.50m below ground level
0.75m	=	Water 0.75m below ground level
1.0m	=	Water 1.0m below ground level

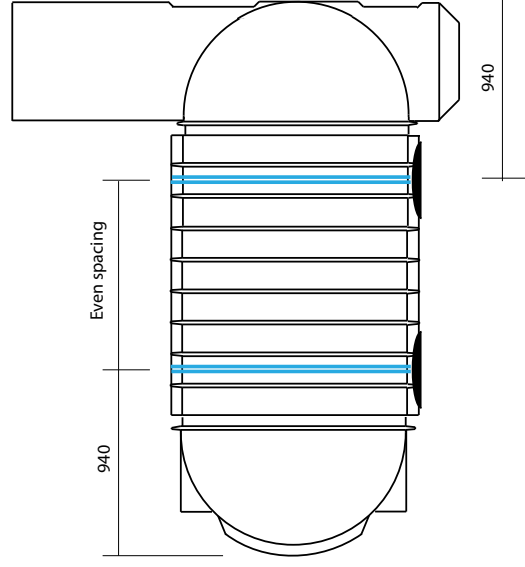
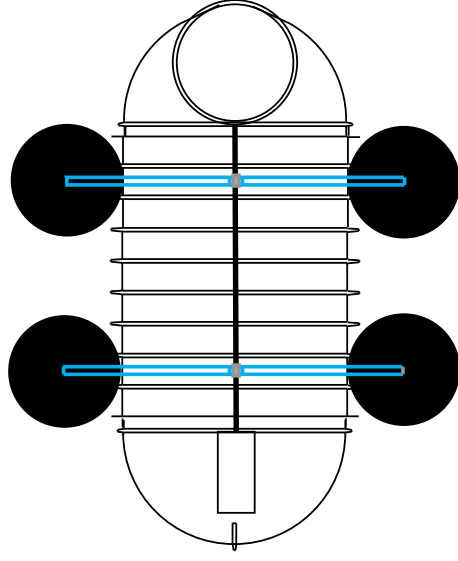
Total fill height is soil plus GAP10/20 (if any)

Example	450mm total height with 250mm GAP
10	
=	250mm GAP10 + 200mm soil (450mm)
	GAP10 and GAP20 are both suitable

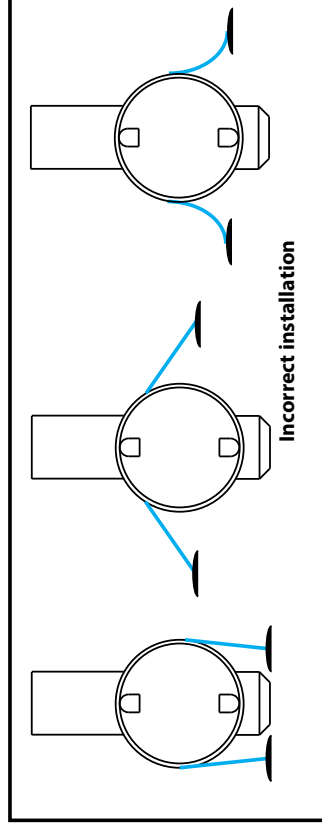
The above chart is a guide, for site specific uplift calculation please use the Devan stormVAULT tool box spreadsheet, please call Devan for the latest version

Ground Compression Anchor Guide - 1200 Series

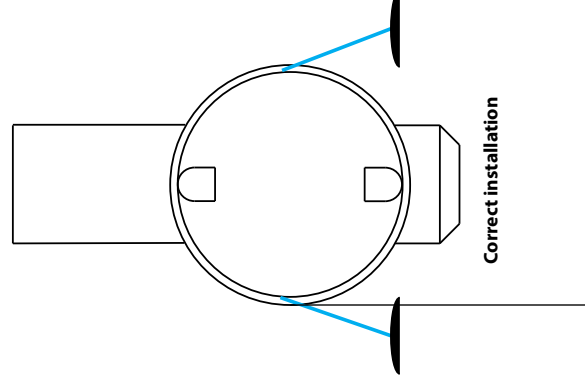




Two anchors must be located 940 from end of tank



Incorrect installation

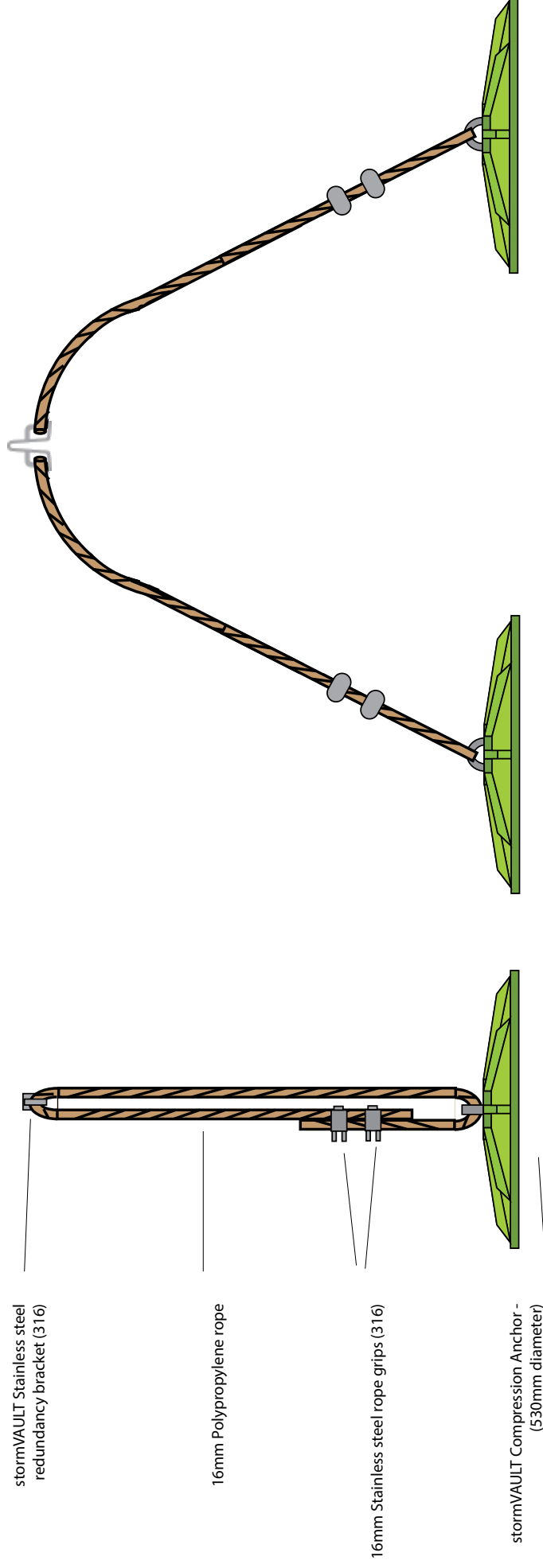
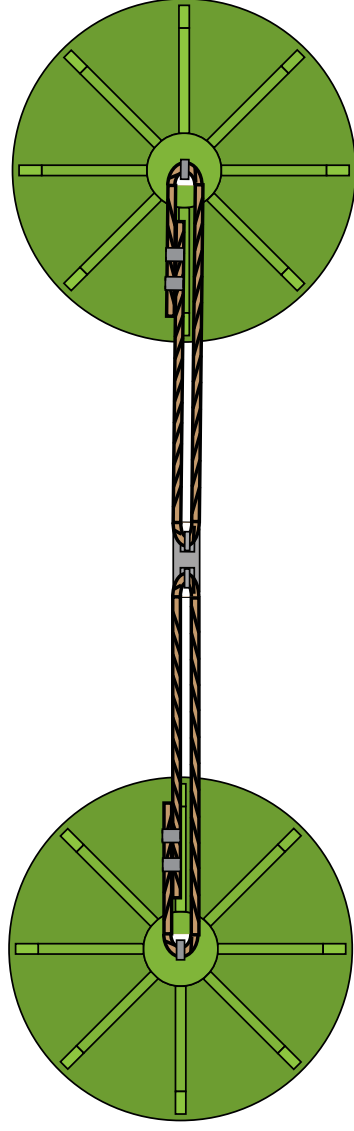


Correct installation

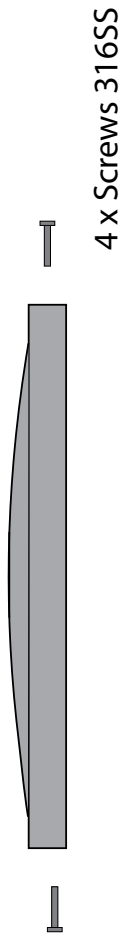
90% of disc must be outside shadow of tank

Important Installation Notes:

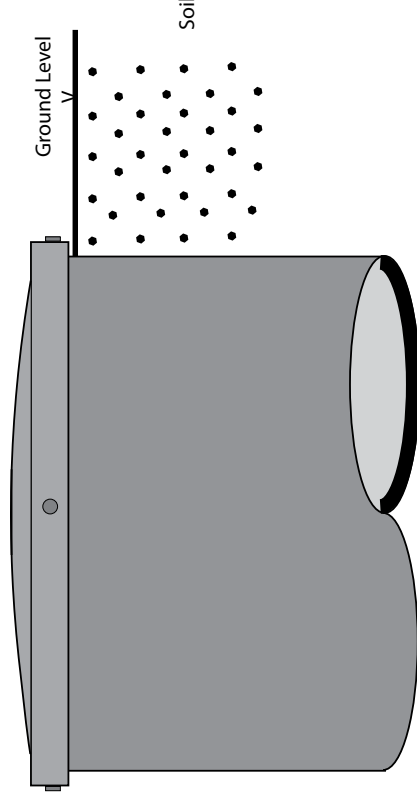
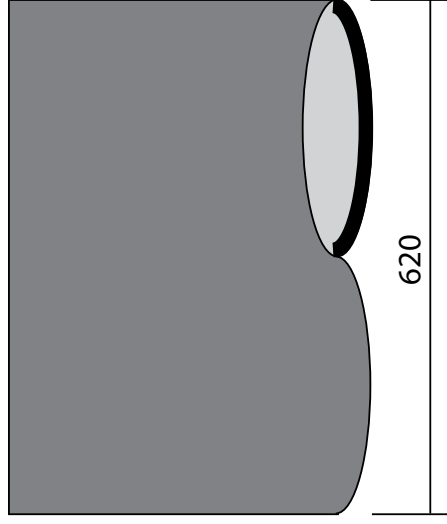
- Pads must be installed level
- Pads should be in line with bottom of culvert section of tank
- Rope must not be slack, use pegs to hold pads in position
- Check rope grips are tight
- Pads must be installed outside of tank shadow to be effective



Uplift Compression Anchor system 1200 Series - Detail

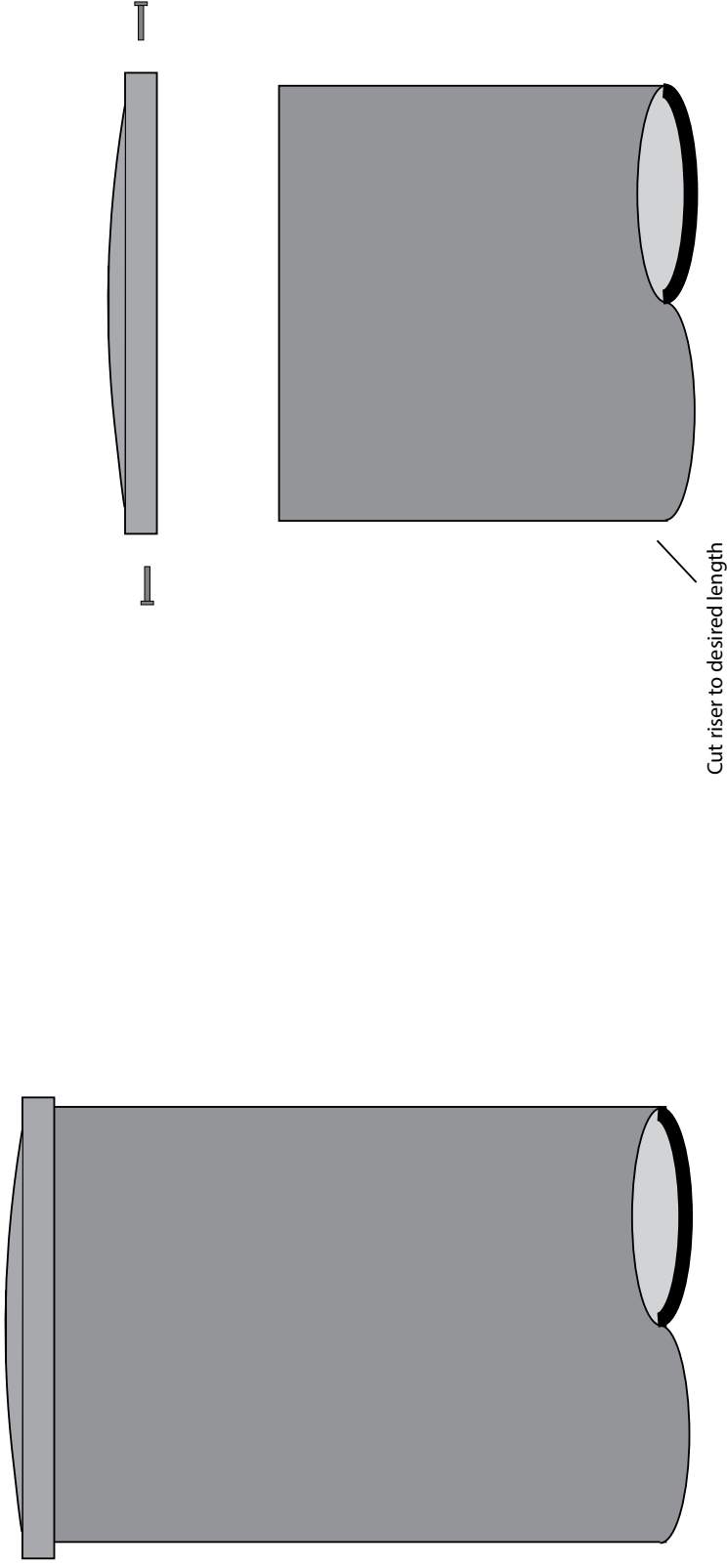


Tank Riser

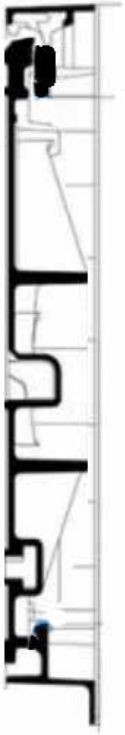


Important Notes:

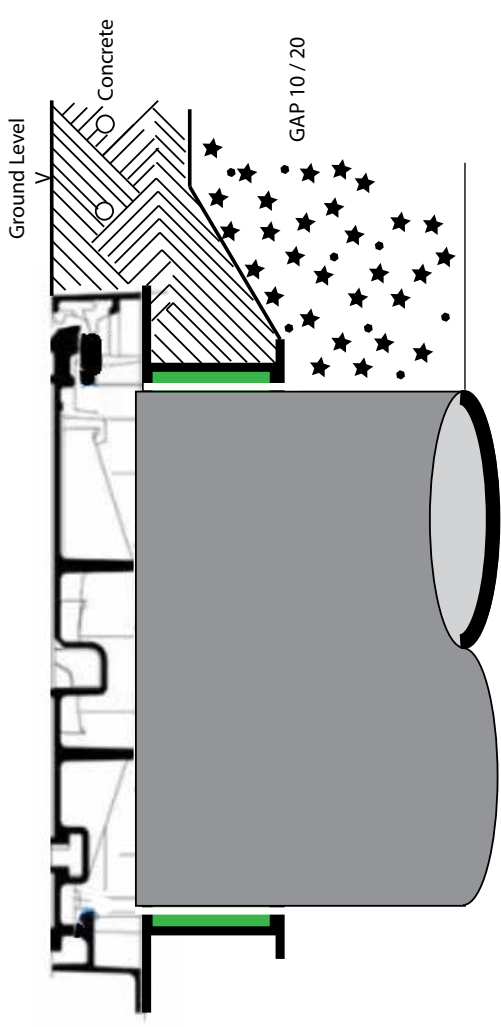
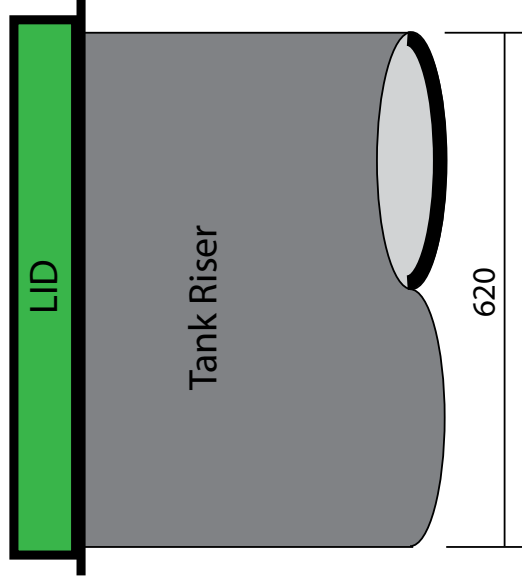
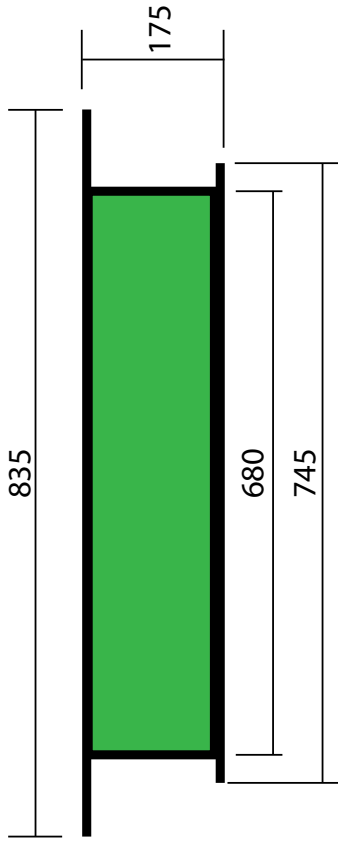
- All lid bolts to be fully installed and tight to prevent access by children
- Top of lid must not be buried
- Slope ground away to prevent flooding or surface water build up



Cast Iron Manway



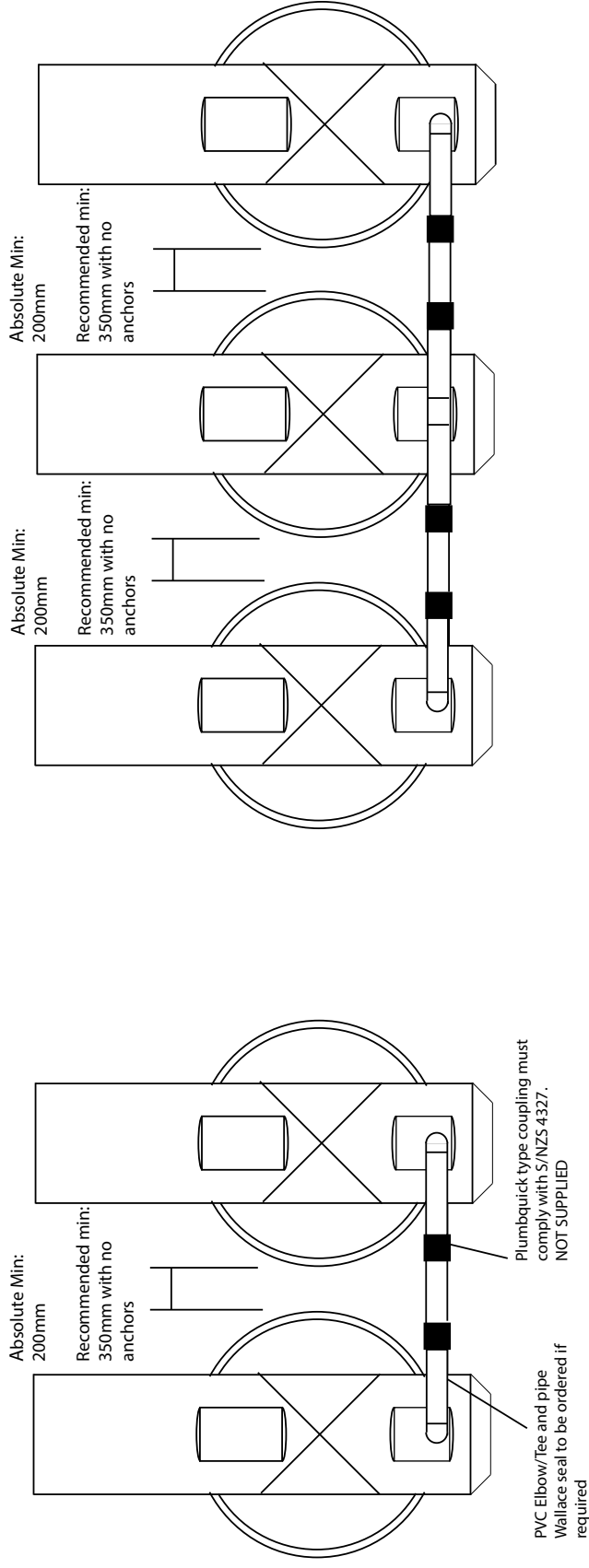
Adjustment Ring



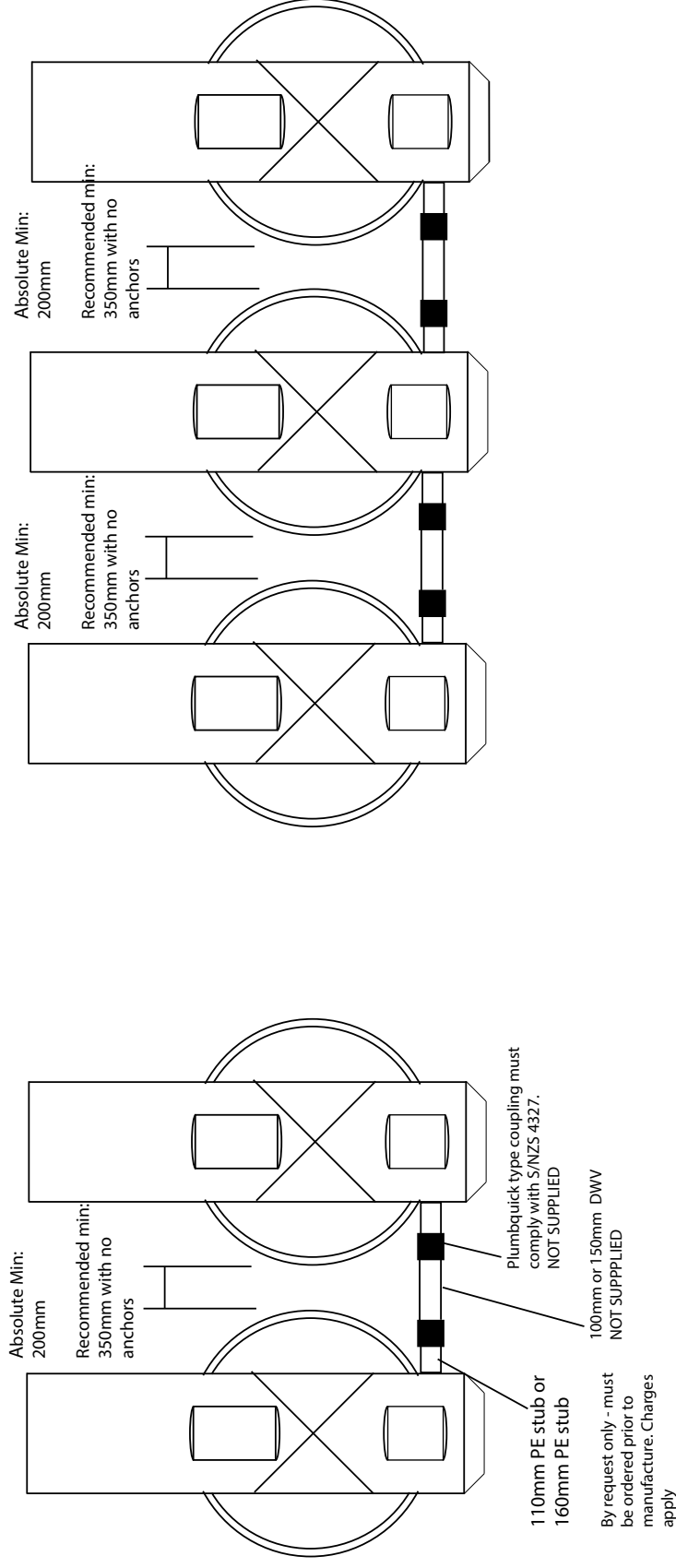
Important Notes:

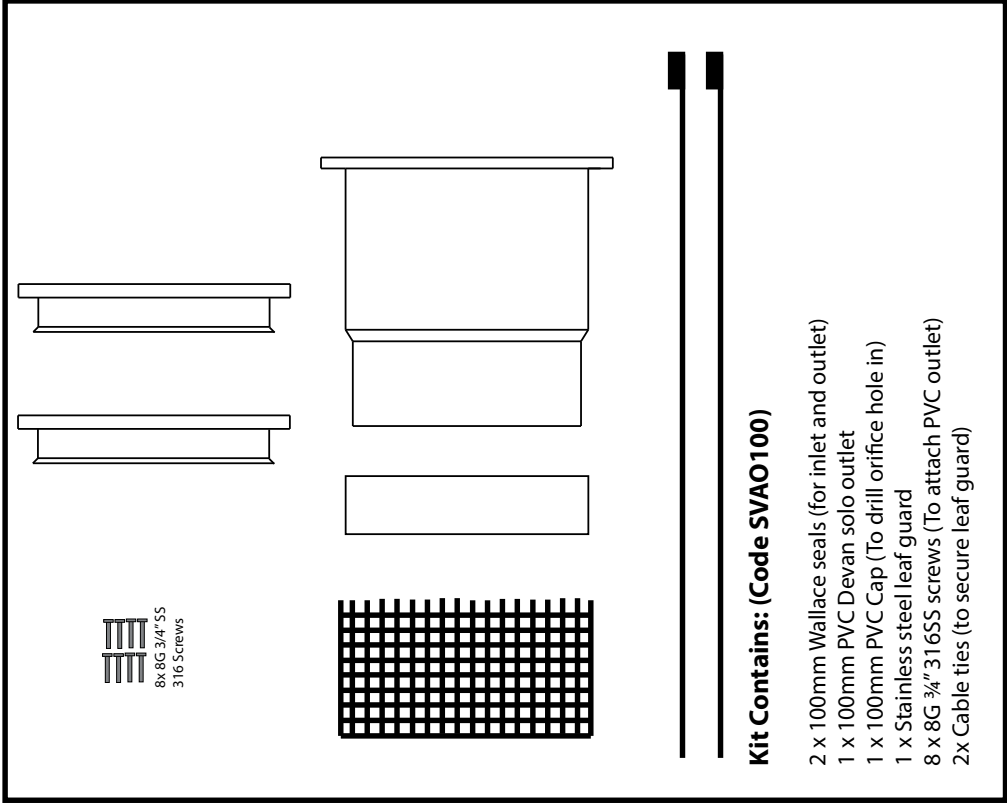
- Top of riser must be flush with top of adjustment ring
- Use adjustment ring to match drive slope if required, maximum 5 degrees
- Do not attach adjustment ring to tank riser
- For reinforcing plan and thickness see engineered drawings
- Lid fully installed to prevent access by children
- Top of lid must not be buried
- Slope ground away to prevent flooding or surface water build up

Option 1 - Onsite

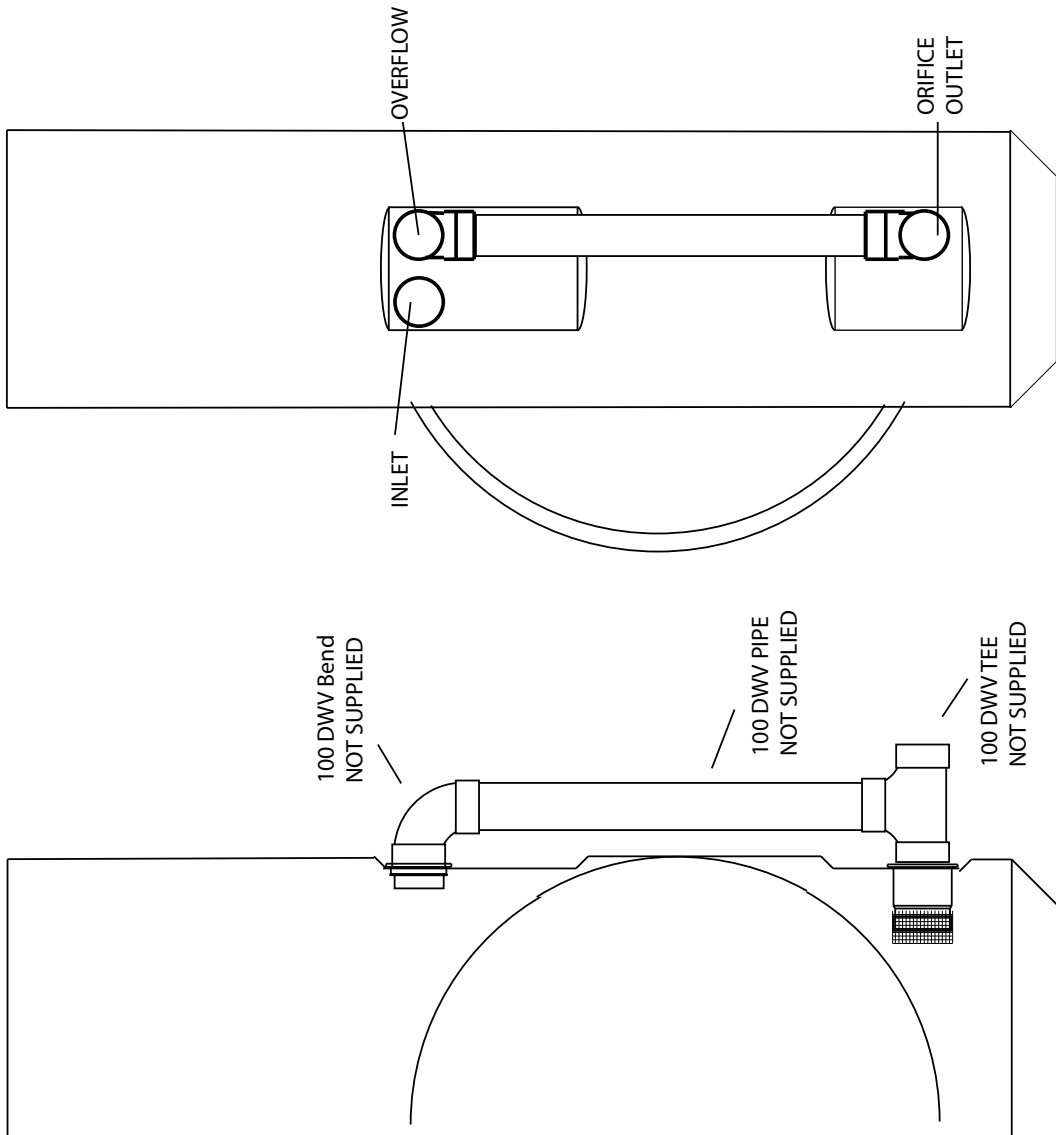


Option 2 - PE stubs





Typical Installation:





12,500L Under drive install



4,000L Dual manways



Outlet Connections



2x 10,000L end to end - multiple welded connections



Multiple welded connections



8,000L Drive install



Multi unit development



10,000L Under drive install



5,000L Under drive install



6,000L under garden install



7,000L tank install part of total - 47,000L drinking water system



Devan Plastics Limited

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Tauranga
07 578 8726**

**40 Illinois Drive
Rolleston
03 344 10650**

