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VersiTank®

Stormwater Management

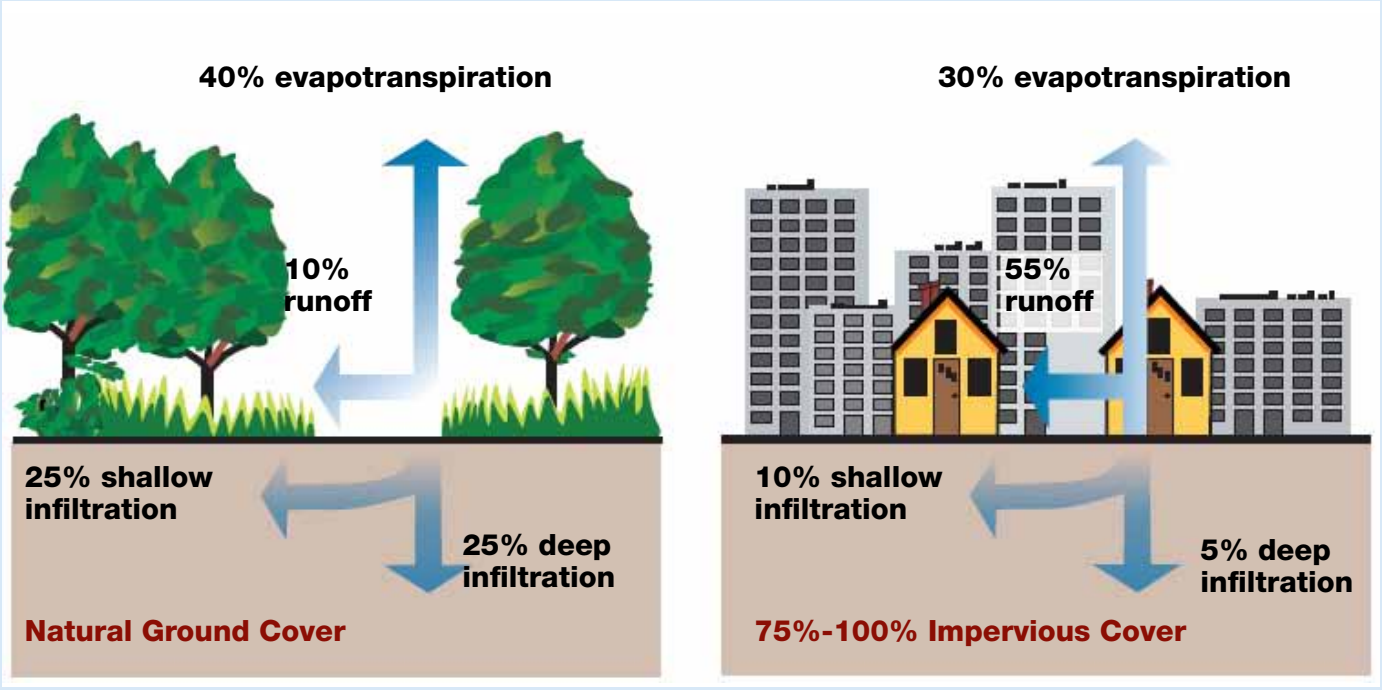
035 - 005
100% recycled materials

ecospecifier 2010/11
as seen on www.ecospecifier.org

Solutions for Sustainable Urban Development

VersiTank®

VersiTank® offers architects, engineers and property owners an efficient and cost effective method to reduce stormwater run-off in urban enviroments.



Source: U.S. Environmental Protection Agency, Washington, D.C.

Rapid urbanisation and industrial development have generated large areas of impervious surfaces such as roofs, roads, car parks and concrete surfaces, with a corresponding reduction in permeable surfaces such as forested land and grass fields. Stormwater run-off that previously infiltrates into natural permeable surfaces now has to flow off impervious surfaces in urban areas. The water is conveyed via drainage systems consisting of open channels and pipes to storage or discharge outlet points.

The removal of natural permeable surfaces creates two challenges in managing stormwater run-off in urban areas: **pollution control** and **stormwater surge**. Conventional drainage systems are typically not designed for at-source pollution control before the water is discharged into drains, streams, lakes and reservoirs.

Changing weather patterns have also led to higher frequency of stormwater surge around the world, and conventional drainage systems are often unable to cope with the substantially increased volumes, resulting in down-stream flooding and higher degree of pollution.

What is VersiTank?

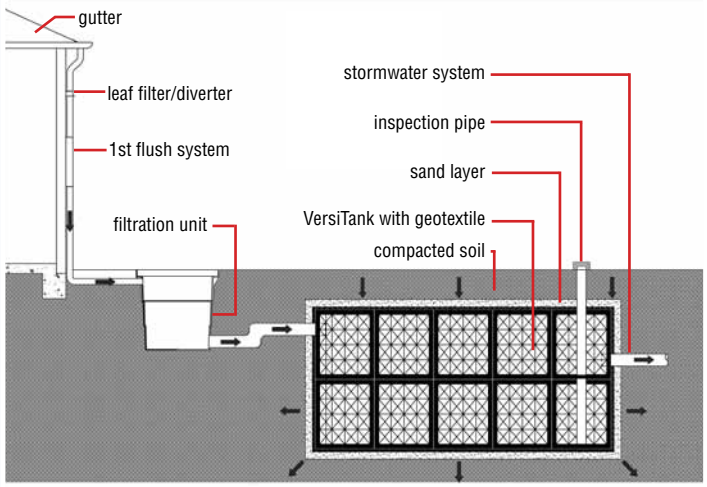
VersiTank® is a high strength modular stormwater infiltration or storage tank made from recycled polypropylene material designed as an at-source management system of rainwater from roofs and other impervious surfaces.

It can be conveniently installed beneath existing or in conjunction with the construction of open ground areas such as parking areas, driveways, bio-swales, rain gardens, playgrounds, sports fields and parks, allowing these surfaces to remain permeable. **VersiTank®** is available in several sizes and installation may be configured in multiple layers to suit the specific requirements of a residential house, parks or large commercial or industrial developments.

Advantages

- High compressive strength allows use under trafficable areas
- Interlocks vertically and horizontally for maximum stability
- Less costly than concrete and metal storage systems
- Low storage and transportation cost
- Caters for all volume requirements
- Easy assembly of panels and installation of units
- No surface water storage hazards
- Contributes to achieving LEED SS, WE and MR credits and BCA Green Mark points

VersiTank Infiltration System

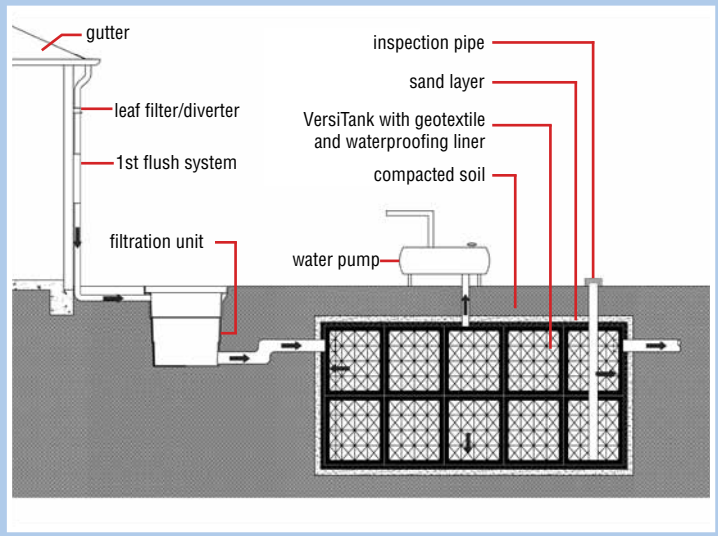


VersiTank® units enveloped with a filter fabric, allows rainwater to percolate through the filter into the tank below whilst ensuring that solids, including mud and clay are filtered and prevented from entering the tank.

Slow percolation of rainwater from the surface into the tank and then slowly infiltrating into the immediate substrate, allows stormwater to be filtered at source and ensures that clear clean water is eventually discharged into drainage networks. Residence time of run-off prolonged by this slow process also minimises downstream impact from high volumes of water in torrential downpours.

VersiTank® Infiltration System installed at a park

VersiTank Retention System

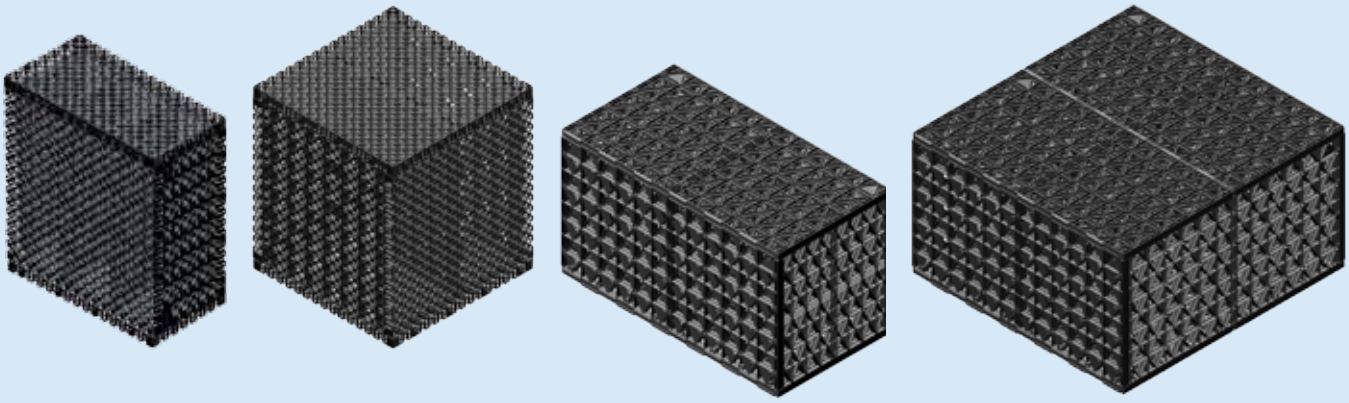


VersiTank® units installed with an impermeable shell membrane, enables filtered rainwater channeled via pipes or allowed to slowly percolate into the tank from the surface to be retained and stored.

Installation of a water pump enables the retained water, from rainwater run-off, to be utilised for general washing and irrigation of landscaped areas, or when connected to a filter system, can even be used for flushing of toilets. Retention of the water also prolongs the residence time of run-off, helping to mitigate high volumes of water in torrential downpours and minimise downstream impact.

VersiTank® Retention System installed at a residential house

VersiTank® Models



VT 250 VT 550 VT 840 VT 880

Specifications

	VT 250	VT550	VT840	VT880
Dimension (mm)				
Length	500	500	745	745
Width	250	500	395	790
Height	560	560	425	425
Volume (m^3)	0.07	0.14	0.125	0.25
Tanks per m^3	14.3	7.1	8.0	4.0
Weight (kg)				
2 Stablizers	3.4	4.8	-	-
3 Stablizers	-	5.8	7.6	12.3
4 Stablizers	-	6.8	8.3	13.7
5 Stablizers	-	-	9.0	15.1
Max. load - unconfined (t/m^2)*				
2 Stablizers	9.0	6.0	-	-
3 Stablizers	-	8.0	18.0	8.0
4 Stablizers	-	10.0	23.0	10.0
5 Stablizers	-	-	27.0	12.0
Surface area (m^2)	1.1	1.62	1.54	2.48
Surface void area (%)	~62	~62	~38	~40
Internal void (%)	~95	~95	~93	~93

Material	Polypropylene
Colour	Black
Biological/Chemical Resistance	Unaffected by moulds and algae, soil-borne chemicals, bacteria and bitumen

Note: The information provided in this brochure is based on current knowledge and experience and does not infer any legally binding assurance or warranty, expressed or implied. Intending purchasers should verify whether any changes to specifications or applications or otherwise have been made since the issue of this literature. Environmental-friendly recycled materials are used wherever possible and physical product properties including colour may differ due to source of raw materials used. Colour may also fade due to UV exposure. All components of the product are designed for specific application, design calculations and any variation and/or deviation therefrom shall be the responsibility of the Specifier and/or User.

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