Toroid Underground Water Tanks

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Viscount Rotational Mouldings’ (VRM) Tankmasta Toroid Underground Water Tank was designed after recognizing a need in the industry for an underground tank that is structurally strong, resistant to hydrostatic lift pressure and easy to install.

Made from chemical resistant, food grade, LLDPE resin, Toroids have been designed to withstand external forces with an S.G. of 2.1. The chemical resistance of the tank has a profound effect on the underground tank’s life span and maintaining hassle free water storage.

The design of the Toroid shape gives the tank’s their superior strength. The central void allows the tank to be incorporated into heavy-duty load situations.

Low cost installation:
The Toroid is designed to provide you with low cost installation due to the low profile reducing the excavation depth. This reduced depth also minimizes the chance of hitting hard rock and ground water, saving on both excavation and ballast costs.

Safe Working Environment:
As most Toroid installations do not exceed an excavation depth of 1500mm, there is no requirement to provide perimeter fencing or excavation shoring as required under Worksafe’s Working at Depth Guidelines (Mines Act - Trenching 1982). Toroids low profile undergrounds provide safer, easier and quicker installations.

Done and Dusted:
Building? Coordinating a building site and traffic management is crucial to the hand-over date. Toroid underground ticks the box for water storage without congesting the busiest time of the build. They can be installed anywhere on site, including the set back zone for the house, in the preliminary stages. They can also be installed in trafficable areas such as under the driveway well before building commences.

Water Table:
Plastic weighs less than water, so if an empty tank comes in contact with ground water it will float. The Toroid’s patented compression ballast system has the entire ballast sitting on top of the tank as a dead weight, providing the most reliable protection against hydrostatic lift.

(Not all installations will encounter this issue and this is the reason all installations must undergo an individual site evaluation. If in doubt, work to the worst-case scenario and assume that ballast should be used.)

Flexible installation:
As no two installations are ever the same, VRM has developed a range of simple to use accessories to make life easy for you.
Specifications:

Interconnect:

Increase Capacity:
Toroids can be coupled together in any combination to achieve greater capacities by simply using the interconnection foot.
Note: The Toroid’s new independent filter system means interconnected tanks can be served by just one barrel filter assembly (refer to image on right).

Retention / Detention:
The interconnection foot is also the foundation of a retention / detention system. By drilling a hole to match the discharge rate through the interconnection foot, positioning the overflow pipe at the desired storage level and linking this with the barrel filters overflow a simple, effective 100mm retention / detention system can be created.

Accessories:
1. TA1960 Adjustable Collar (TA1962 Foam Filled)
2. TA2022 Cone Riser
3. TA1970 Barrel Filtration Assembly
4. 23TF0605 100mm PVC BSP Coupling
5. 23TF0602 100mm PVC Swivel Joint
6. 23TF0601 Backflow Prevention Unit
7. 21HW0018 Laser Cut 12mm Mild Seal Ring
Step-by-Step Installation Instructions

Step 1: Excavate hole to dimensions.
Step 2: Prepare level base of hole with backfill material.
Step 3: Attach barrel filter unit & if required position adjustable collar.
Step 4: Lift tank into hole using lifting lugs on top of tank.
Step 5: Fill around perimeter of tank with backfill material.
Step 6: Fill centre of tank up to 150mm below the tank’s half way flange with backfill material.
Step 7: Fill centre of tank with backfill material and/or concrete ballast.
Step 8: Tank is now ready to be covered and landscaped over.
Step 9: The best looking tank you’ll never see!


Please Note: The steps above should only be used as a summary; please refer to the Toroid Installation Manual for specific details.