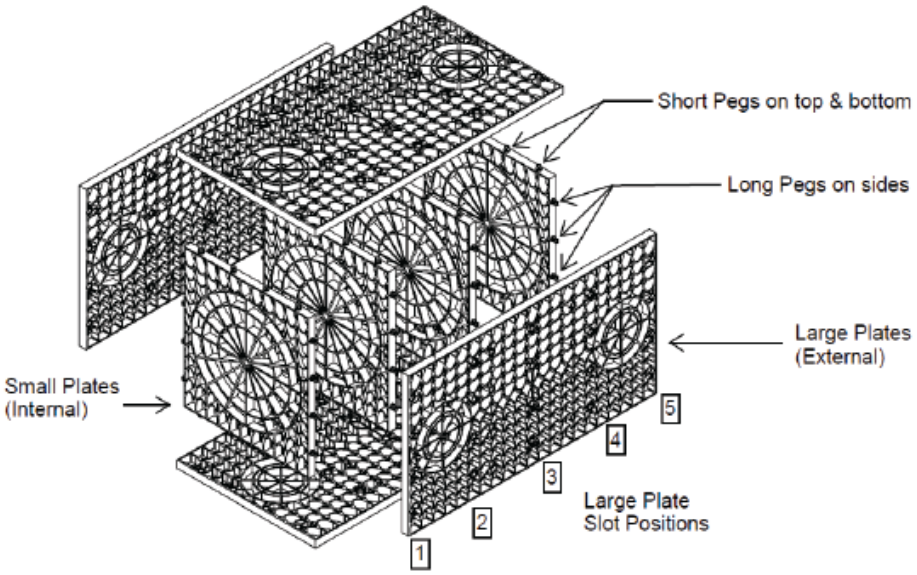
Doing Good From The Ground Up

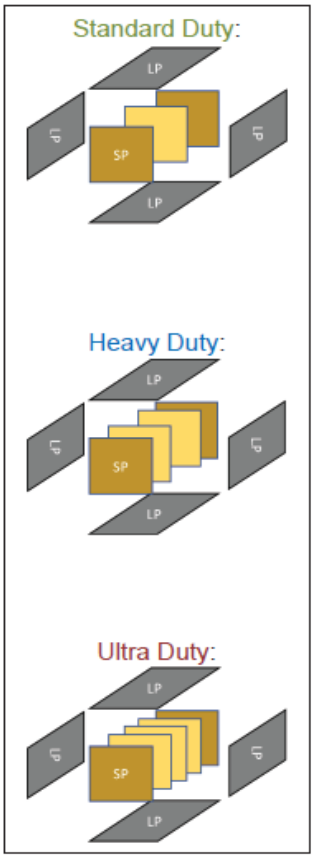
ProTank® ASSEMBLY GUIDELINES

Assembly and Installation shall be in accordance with the project plans and these guidelines or as directed by the Project Engineer.

ProTank has 3 different configurations for strength:
- Standard Duty: (3-small plates per module) - Non Trafficable Installation
- Heavy Duty: (4-small plates per module) - Trafficable Installation
- Ultra Duty: (5-small plates per module) - Trafficable Installation

This assembly guideline shows a four small-plate "Heavy Duty" configuration. For Standard Duty or Ultra Duty, please install correct amount of small plates into relevant slots shown on the right hand side of this page.





Final Dimensions of Assembled Pro Tank Modules			
	Length	Width	Height
Single	720mm	403mm	403mm
Double	720mm	403mm	866mm
Triple	720mm	403mm	1,289mm
Quad	720mm	403mm	1,712mm
Penta	720mm	403mm	2,135mm

*Penta height only with Heavy Duty and Ultra Duty configurations

If we have provided a design suggestion or quantities it is for evaluation purposes only – it is not to be considered a formal design or estimation, as we are not consulting engineers or estimators. As a result, we accept no responsibility for design verification or 'take-offs' and no warranty is implied or granted in any design/estimation or assistance we may give. Accordingly, we recommend that a complete engineering design be performed by a suitably qualified engineer. Responsibility for approval by the design engineer is therefore to your care, however, we remain available to assist you in any way possible.

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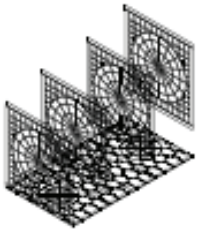
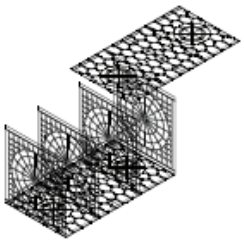
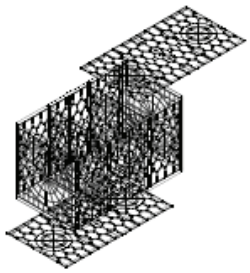
STEP 1: Lay one ProTank Large Plate on a flat surface and insert four ProTank Small Plates in slot positions 1, 2, 4 & 5. Strike into place using a light rubber mallet; avoid striking the pegs with the mallet. The Small Plates should be oriented such that their long pegs are facing vertically.



STEP 2: Align a second Large Plate against the top row of upstanding long pegs and strike into place as with step one.

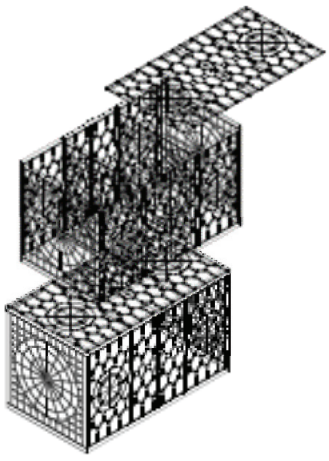


STEP 3: Place a third Large Plate onto a flat surface. Flip the ProTank Module through 90 degrees and position over third Large Plate. Make sure all short pegs are aligned when positioning.



STEP 4: Fit the fourth ProTank Large Plate against the top row of upstanding short pegs. Strike both third and fourth Large Plates into place using the light rubber mallet. Check that the module is in correct orientation for installation (i.e. short pegs aligned vertically).

NOTE: The above steps are for single height ProTank modules. When assembling double, triple, quad or penta height ProTank Modules, the top ProTank Large Plate becomes the base Large Plate of the ProTank Module above it (i.e. one ProTank Large Plate is saved for every Module increment in height). Repeat steps above as necessary.



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PROTANK INSTALLATION GUIDELINES

Excavation
Excavation shall be deep enough to provide adequate cover to the assembled ProTank Modules. If natural material is unsuitable as a base for assembly of ProTank Modules, additional depth of excavation is to be allowed to permit a 100mm-200mm of clean fill to be placed on the base of the excavation Base of excavation shall be approximately 1000mm wider than the proposed modular structure perimeter footprint to permit reasonable access for installation and compaction.

Backfill and Compaction
Base of excavation shall be smooth and compacted to 90% MDD or to the satisfaction of the Engineer. Backfill around the perimeter and over the top of the ProTank Modules shall be compacted in 300mm layers to a minimum in front of 90% MDD or to the satisfaction of the Engineer.

Delivery / Storage of ProTank Modules & Site Protection
Protect ProTank Modules from damage during delivery and storage at site. Lay down area should be level, clean and free of debris. Where ProTank Modules are to be stored on site for periods greater than one week, they shall be suitably covered with tarpaulins.

Backfill Cover
The minimum backfill cover over the ProTank Modules shall be 300mm for pedestrian and non-traffic areas, and 600mm for trafficable areas, or as directed by the Engineer. The maximum depth of cover over ProTank Modules shall not exceed 2000mm.
Note: The determination of future allowable use for the area above the tank will also be influenced by the number of vertical plates used in the assembly of the ProTank Modules. Advice on allowable loads should be sought through the Project Engineer and in consultation with the Manufacturer. No machinery shall drive on top of tank until 600mm of compacted cover is achieved. Avoid driving heavy machinery over the completed tank.

Geotextile
The entire assembled structure of ProTank Modules shall be completely wrapped in geotextile. Where the assembled modules are to be used for infiltration, the modules shall be wrapped with Multi-tex AS150A as a minimum grade geotextile. Where lap joins in the geotextile are required, the adjoining geotextile shall be overlapped a minimum of 500mm. All overlap joins shall be taped or secured by other means to prevent the ingress of fill material. *ProFab Monoweave130 is a woven geotextile composed of UV stabilised monofilament yarns. It is particularly suited to soils that are poorly graded, as well as soils are that are high in biological content. Monoweave130 exhibits clog resistant characteristics as opposed to standard non-woven geotextiles which are prone to clogging in soil environments mentioned above.

ProTank Modules
ProTank Modules are to be installed with base dimensions of 403mm x 720mm. ProTank Modules are to be installed in the direction shown on the plans and to a straight alignment. All ProTank Modules are to be placed hard adjacent to each other preventing any gaps. Identify locations for inlet pipes, any outlet pipes, vent locations and/or inspection ports. Having inspection and breather shafts installed vertically eases inspection and air flow, whereas inlets and outlets can be vertical or horizontal. All large ProTank plates have pre-fabricated access ports for 90mm, 100mm and 150mm pipe connections. All small ProTank Plates have pre-fabricated access ports for 150mm, 225mm, and 300mm pipe connections. Using a "Keyhole Saw" or similar, remove the inner ProTank plate material to provide a pipe access of the required size. Ideally, inlet and outlet pipe connections shall penetrate the ProTank Module through an outer and inner vertical plate. Inspection and duct / vent pipe connections using slotted pipe (within the tank) shall penetrate into the lowest ProTank Module to reach near the bottom of the proposed tank. The pipe access ports are best facilitated during ProTank Module assembly. Record the locations of the proposed pipe connections. Once the ProTank Modules have been wrapped in geotextile and/or liner, make a small vertical and horizontal slit in the wrap materials at the locations of the proposed pipe connections. Pass the pipe connections through the wrap materials and into the ProTank Modules. Completely seal the pipe penetrations with tape and/or geotextile to prevent the ingress of fill material.

Landscaping
Ensure the required cover is maintained above the ProTank Modular Tank. Ground covers or paving materials may be placed over the underground tank. The placing of large shrubs or trees over or close to the underground tank must be avoided.

Additional Information
Additional information on module properties may be gained by referring to relevant module data sheet.

Pipes, Vents, Chambers
All pipework, vents, inspection chambers and any other associated pipes and surface collection details are to be specified and detailed by the Designer.

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