

MODULAR WATER TANK



ASSEMBLY INSTRUCTIONS

2007

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INTRODUCTION:

Thank you for your purchase of the Modular Tank. This is an innovative product that combines the strength of steel with a liner that can store drinking (potable) quality water.

I know you're eager to assemble the tank but please take the time to read the instruction manual from start to finish as this will help you as you assemble the tank.

We would appreciate any comments you have about the assembly process or the instructions contained in this manual.

PRECAUTIONS:

The components that the tank is made from are steel and may have sharp edges and burrs. We recommend the use of soft leather gloves (riggers/gardening) if you are not familiar with the handling of steel products.

Caution should be taken when using power tools in the assembly to ensure plugs and cables are protected from sharp edges that may cut and pose an electrocution risk. Do not use power tools on wet ground or during wet weather. Follow the power tool manufacturers instructions at all times.

Ensure that any climbing equipment (ladders/stools) is secured and does not create a gravity hazard or cut through the liner.

The tank may be assembled by one person but we recommend two people as this makes the assembly much easier.

TOOLS REQUIRED:

Minimal tools are required for the assembly,

- a. A good quality, fully charged battery drill or a reversible variable speed power drill
- b. A "Tech" screw bit to suit
- c. A sharp "Stanley" knife or similar product
- d. A medium Phillips (cross tip) screwdriver
- e. A large (380mm) shifting spanner, footprints or a Stilson wrench
- f. An old piece of carpet, mat, thick cardboard or rubber sheet

As you will be installing a large number of self drilling “Tech” screws a second battery for your drill will be an advantage.

SITE PREPARATION:

The tank may be placed on any flat firm surface of Sand/Soil/ground, Pavers, Crusher Dust, Bricks or Concrete. If the soil is soft it is best to place a brick or paver under each frame joining point.

Ensure that the installation and location of the tank complies with any local council requirements.

It is best if the tank is assembled in place to avoid movement that may catch and cut the liner.

Remember when locating the tank to allow sufficient space for your plumbing and any pump you are fitting.

PARTS IDENTIFICATION:

The major parts of your tank are identified by the following drawings and pictures.



End (cross) Rail
Colour Yellow

Note that the yellow piece for a 1.2 wide tank has additional upright lug in the middle and the pieces to be used on the bottom of the tank has an additional piece of steel welded to the inside for additional reinforcing.



Side Rails Type 1
Colour Red

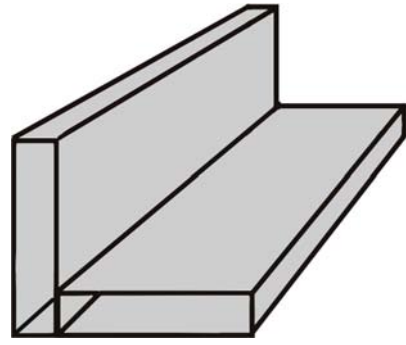


Side Rails Type 2
Colour Black

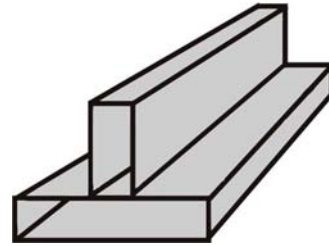


Centre Cross Rail
Colour Green

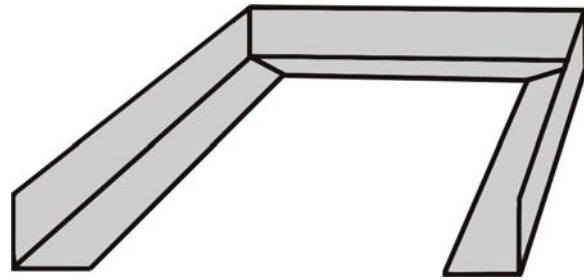
Corner Vertical Piece



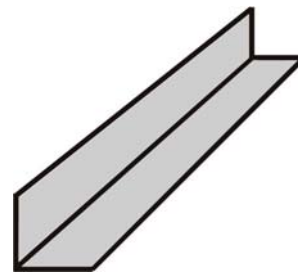
Centre Vertical Piece



Top Trim End Piece



Top Trim Centre Piece



In addition you should have,

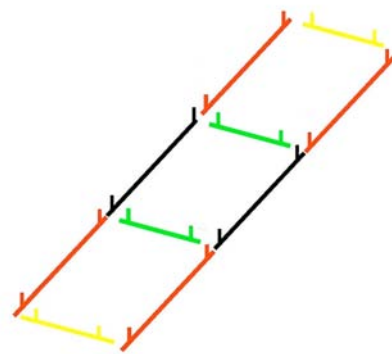
- a. Corrugated Colourbond or Zinalume panels
- b. Flat top panels
- c. An inlet strainer
- d. An outlet fitting (RXTTI25)
- e. An overflow fitting
- f. A bag of “Tech” screws

- g. A “tech” driver bit
- h. A roll of Duct Tape
- i. A Plastic Worm Clamp
- j. Tank Liner
- k. Geo Fabric Piece
- l. Screws to secure the outlet fitting and inlet strainer
- m. Tube of Silicon

The number and type of frame pieces supplied will depend on the size of your tank.

ASSEMBLING THE FRAME:

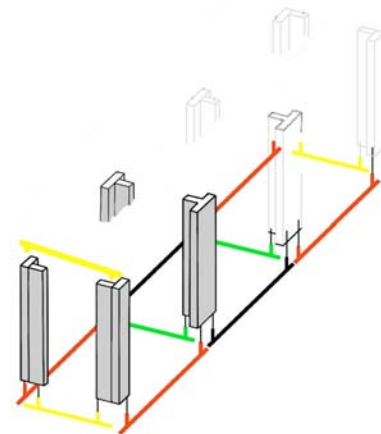
Lay out a set of rails to form the base of the tank. The base should be exactly where you want your completed tank to be located.



ESSENTIAL NOTE:

The vertical lugs on the “Type 1 Side Rails” are not identical so ensure that the painted (red) ends are placed next to the “End Cross Rail”

If you have a 1.2 metre wide tank refer to the diagram on pages 15 & 16 as these tanks have an additional “Centre Vertical Piece” and 2 shorter “End Cross Rails” at each tank end.

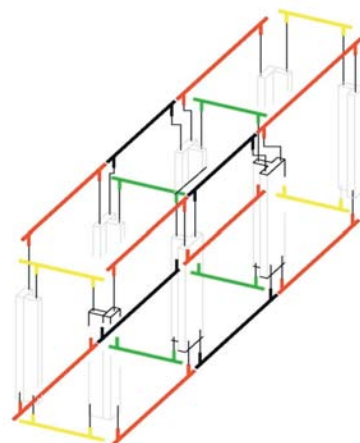


Once this is done start to add the vertical pieces starting at one end by adding 2 “Vertical Corner Pieces”

Note the orientation of the “Corner Vertical Pieces”.

Insert an “End Cross Rail” in the top to steady the verticals.

Now add 2 “Centre Vertical Pieces” and fit a “Centre Cross Rail”.



Continue until all verticals and cross rails are fitted. To finish the frame add the remaining side rails.

Check that your tank frame is in the desired location. If it is not, now is the time to carefully slide the frame into place.

Handy Tip:

Ensure the frame is square by measuring the diagonals. The measurement should be the same within a few millimetres. Check again that you have the frame rails in their correct locations. Make sure that you have yellow on the ends, green across the centres, red and black on the sides.

INSTALLING THE PANELS:

It is important to remember that when you have finished installing the wall panels that the only way out of the tank is over the top. Plan your exit strategy now.

Separate the end and side wall panels into two piles. Identify the overflow and outlet panels. 1.2 metre tanks have 2 panels per section. 1.8 metre tanks have three panels per section.

The overflow panel has a 90mm hole and the outlet panel has a 40mm hole.

Start with the overflow panel. Put the panel in place with the colour out and the overflow hole to the top.

ESSENTIAL NOTE:

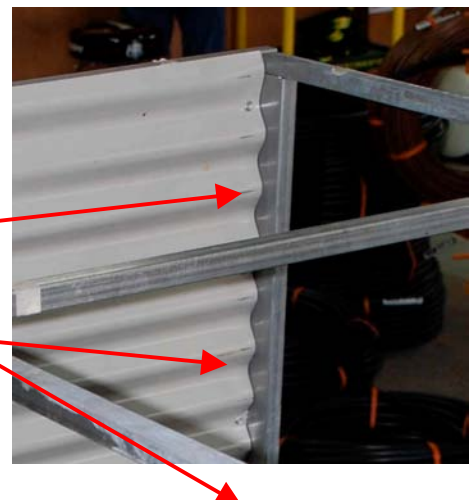
The edge of the top corrugation is facing out.

The overflow panel must be 10mm off the top edge of the “End Cross Rail”. All other panels must align with the top edge of the Cross Rail.

Install a tech screw in the first corrugation valley as shown. Repeat on the opposite side.

Count 2-3 rows down and install the next tech screw. Continue this pattern on both sides until the last valley is reached or your next sheet needs to be positioned

Do not install screws here yet.



Overlap the next panel approximately 1-1/2 corrugations (2 complete corrugations for 3 panel tanks) and fix in place with tech screws every 2 rows down.

It is normal for the bottom panel to extend past the bottom of the frame and curve inward. Do not extend the overlap to make the bottom panel flush with the bottom frame rails.

The bottom panel at this end will normally have the 40mm hole for the outlet.



Repeat the process for the other end.

Continue the wall installation by installing the side panels using the same pattern for the tech screw locations.

Handy Tip: To assist in locating the tech screws in the side wall panels turn each panel upside down and inside out. Place it in the frame opening and using a pencil mark down the frame edge on each side. Return the panel to the proper position and you will have guidelines. Install the tech screws between the guideline and the frame.



Once all panels are in place use the roll of tape supplied to cover the join between wall panels and the top frame rails.



Then Cover the joins between the panels



And then the corners

Screw the overflow fitting onto the outside of the tank using the supplied small self tapping screws. Place tape over the screws ends protruding into the tank.

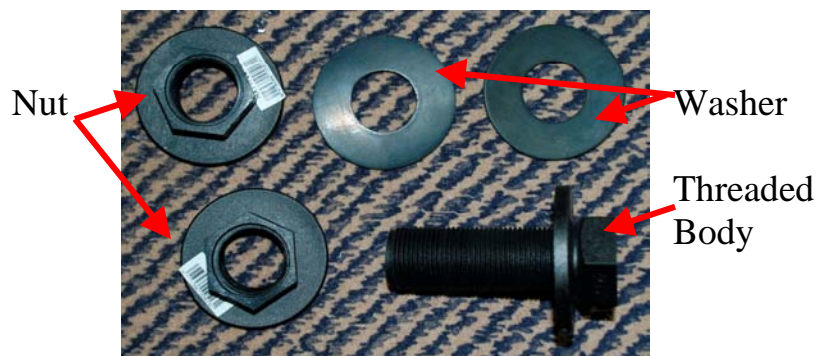


The last part of the frame assembly is to fit the outlet to the wall sheet.

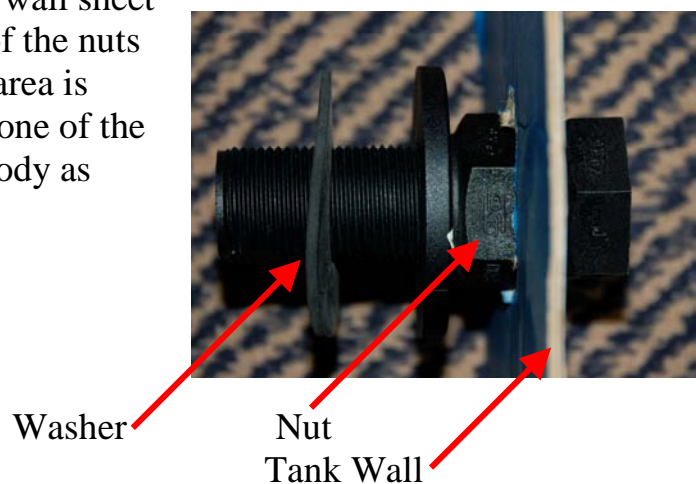
Locate, using the picture, the outlet assembly.



Disassemble the outlet assembly and identify the parts as shown below



Pass the threaded body through the wall sheet from outside to inside. Screw one of the nuts onto the body so that the large flat area is facing the inside of the tank. Place one of the rubber washers onto the threaded body as shown.



This concludes the frame and wall assembly.

Do a final check to ensure your tank is in the desired position and square. If not gently slide it into position and check again that the tank is square.

INSTALLING THE TANK LINER:

Place the Geo Fabric piece in the bottom of the tank and position it so that it covers the bottom and up the walls. Use the supplied tape to hold it in place.

ESSENTIAL NOTE: For the remainder of the install you will be standing inside the liner so ensure that any footwear has soft soles or work in socks or bare feet.

Remove all the “Centre Cross Rails. Place the liner in the bottom of the tank and unfold. Standing in the liner spread it out so that the corners of the liner fit neatly into the corners of the tank. Then carefully lift the liner up and fold the liner sides over the top of the tank frame. Do not pull it up tight some slack must be left between top and bottom.

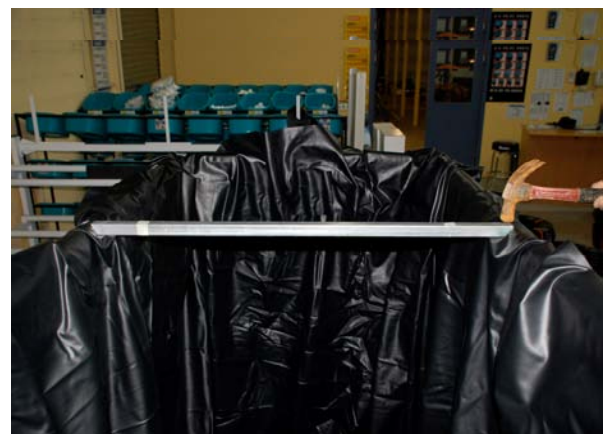


Ensure the liner is evenly spread around the frame and tape to hold in place. Some wrinkles and folds are normal.



Locate the tops of the “Vertical Centre Pieces” where the “Centre Cross Rails” were located and cut a small cross in the liner at that point.

Insert the “Centre cross Rails” and push or tap into place.



Locate the outlet fitting and leaving a little slack between the bottom of the liner and the fitting push the liner back against the outlet.



With a sharp Knife cut carefully around the outlet fitting thread. Create a **round** hole slightly larger than the thread on the outlet. The hole should be larger than the thread so it will not sit up the thread.



Then push the liner over the outlet thread.

Place a generous amount silicon gel on the liner AND between the edge of the liner and the thread AND cover about 1cm up the thread.



Place the washer on the thread and then screw the remaining nut onto the thread and tighten firmly. **Make sure there are no creases or folds in the liner between the 2 washers.**

Place another generous amount of silicon on the thread where it meets the nut.



Locate the stormwater overflow outlet and using the same technique as the outlet fitting, push the liner against the fitting.

Loosen the supplied plastic worm clamp and place it over the overflow outlet.



Using a sharp knife cut a cross in the liner about **60mm long** inside the overflow outlet. This is about 2/3 of the diameter of the pipe. Then push the liner back over the overflow fitting. The liner must fit tightly over the outlet to create the best seal.



Ensure the clamp is located over the liner all the way around the overflow fitting and tighten the worm clamp until firm using fingers and a screw driver.

Do not over tighten as you may strip the plastic thread.



This was the last of the work to be done inside the tank. Check the liner is evenly spread around the tank. Do not be concerned if your liner is oversized. Making sure you take precautions to prevent damage to the liner, exit the tank.

FITTING THE TOP COVER:

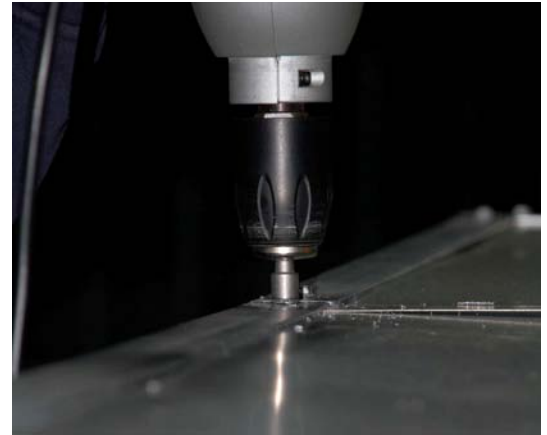
Decide where the inlet is to be situated and then lay the flat top cover sheets in place. Ensure that the edges are flush with the edges of the tank frame rails all the way around. The cover sheets should overlap where they join.

Place a “Top Trim End Piece” on the tank and fix in place with tech screws in the corners and at each end.

If required add a “Top Trim Centre Piece” and fix at each end. Continue by adding any “Top Trim Centre Pieces” on both sides of the Tank.

Add the remaining “Top Trim End Piece” and fix in place.

Place the inlet strainer in the large hole in the top cover sheet and if requires fix with longer tech screws (not provided).



Using a sharp knife trim the excess liner from the tank.



Remove any metal shavings caused by the fitting screws (particularly from the lid) to reduce the chance of surface rust.

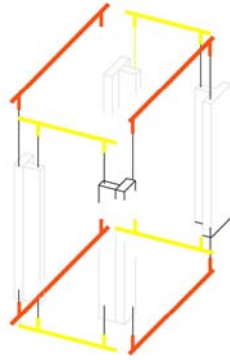
This concludes the tank assembly.

NOTE: When connecting any fittings to the tank outlet it is important that the fitting on the tank be prevent from turning.



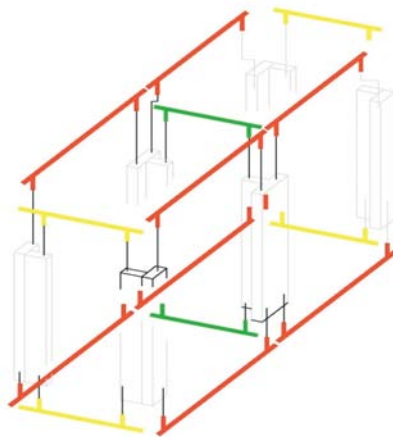
FRAME LAYOUTS:

1 Module 0.95m wide by 0.8m long

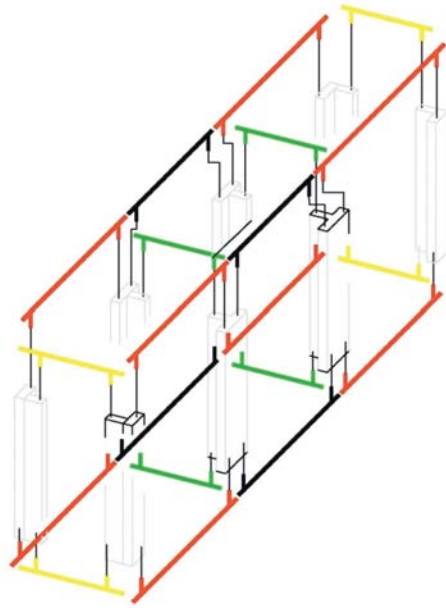


1000 x 950 WIDE MODULE

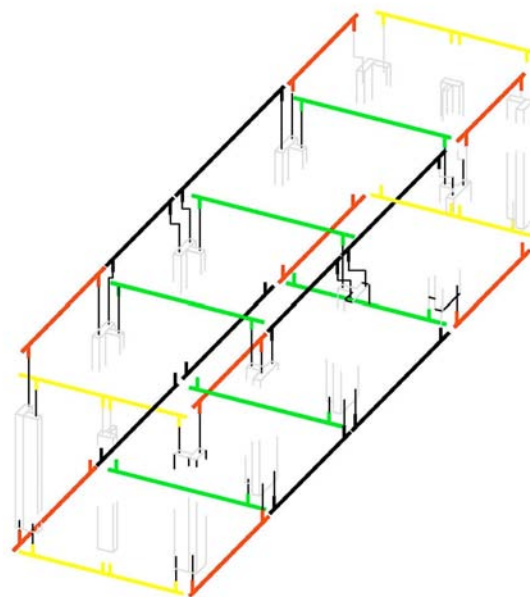
2 Module 0.95m wide by 1.57m long



3 Module 0.95m wide by 2.34m long



4 Module 1.2 metre wide by 3.11m long



5 Module 950mm wide by 3.88m long

