



BLUE NILE
TANKER



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SCAN ME



**GRP-GLOBAL**
TRADING



中国质量认证中心
CHINA QUALITY CERTIFICATION CENTRE



GRP

What is grpl/frpl/smc Water Tank

SMC water tanks is the abbreviation of Fiberglass Reinforced Plastic water tanks,are leading industry and civil standard water storage equipment on the market. There are many advantages such as lightweight, strong structure, modular and sectional assembly by standard panels design. GRP tanks provide safe environment with no risk of bacteria corrosion. Furthermore, Due to the raw material to manufacturing water tank is self-resistant to bad weather and high temperature, meaning the water tank lifespan is long. Meanwhile, all raw materials attribution decides the water tank is pliable, application wide for any specific access or needs

ADVANTAGES OF GRP WATER TANKS

Cost-Effective

- GRP (Glass Reinforced Plastic) is a high-tech reinforced plastic that offers low cost and high performance, making it a perfect substitute for metal tanks.

Easy Installation

- Factory precast panels are easy to assemble and disassemble. Comprehensive construction drawings, installation videos, and complete installation plans are provided.

Durability

- GRP water tanks have a lifespan exceeding 25 years due to their high-quality raw materials sourced from international brands.

GRP

Food Grade Materials

- All panels are made from food-grade materials, ensuring safety for potable water storage.

Dimension Flexibility

- Panels are available in sizes 1 x 1 m, 1 x 0.5 m, and 0.5 x 0.5 m, allowing for the assembly of tanks with volumes ranging from 0.125m³ to 5000m³.

Customizable Design

- GRP tanks can be customized in shape and size to meet specific requirements, with some designs including internal partitions for enhanced utility.

Corrosion and Rust Resistance

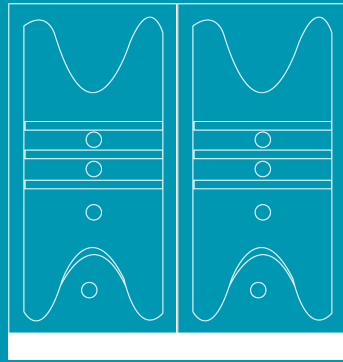
- The tanks are resistant to corrosion and rust, making them suitable for storing a wide range of liquids, including sea water and chemicals.

UV and Weather Resistance

- GRP tanks offer excellent resistance to UV rays and weathering, ensuring longevity in various environmental conditions.

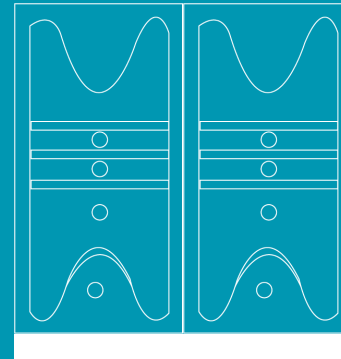


ADVANTAGES OF GRP WATER TANKS



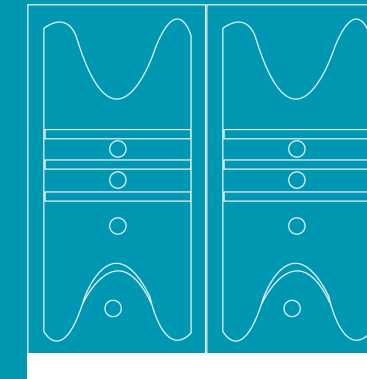
NEW LOCATION

- **RELOCATED** : our GRP panel tanks can be relocated easily from one place to another several times .

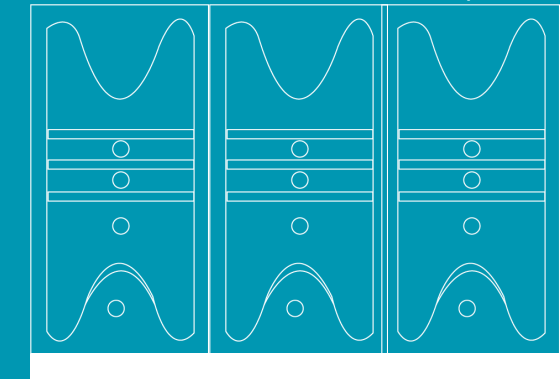


OLD LOCATION

- **EXTENDIBILITY** : our GRP panel tanks can be extended in length and width to provide increased volume as the consumption requires change.



ORIGINAL SIZE



EXTENDED TANK SIZE

- **FLEXIBLE AND CUSTOMIZED SHAPES** : OUR PANEL TANKS CAN BE MADE IN SQUARE , RECTANGULAR L T U OR OTHER CUSTOMIZED COMPLEX SHAPES USING AN ARRAY OF STANDARD PANEL .



STANDARD :

Singapore Standard SS245: 2014 Similar to British Standard BS 7491 Part 3:1994 and BS EN 13280:2001

MATERIALS :

Sheet Molding Compound(SMC)consists of: Resin Isophthalic unsaturated polyester resin conforming to BS 3532 specification Fiber Glass- Low alkali fiber glass conforming to JIS R3411 to R3417 or BS 33396, BS 3496 and BS 3749 specifications

MANUFACTURING PROCESS :

- Placing the right amount of fiber glass on thin fiberglass sheets.
- Mounting the combination in a hydraulic molding press.
- Application of regulated heat and pressure to make it firm and compact.
- During this cycle, different features such as ribs and other inserts are molded in as desired.
- The frame is then taken out of the press and cooled.
- A layer of resin and catalysts are added to the GRP frames and machine-spread between two sheets of GRP. This functions to give it its signature strength.
- The end result is a complex and high strength GRP Tank panel.
- The panels can now be drilled at the sides where they will be joined together with bolts and nuts to form GRP tanks.



TECHNICAL DATA

PANEL

MATERIAL

- 1.Food grade unsaturated polyester resin.
- 2.Alkali free twist glass fiber roving.
- 3.Thickener (MgO), initiator (curing agent), cross linking agent,etc.

SIZE & WEIGHT

- 1.The size of FRP/GRP panel are produced by standard mold, having size 1*1m, 1*0.5m and 0.5*0.5m.1*2m and 1*1.5m
- 2. The panel thickness is depends on tank height.
- 3.The available highest height is 5 meters (Add external C channel or I- beam reinforcement is needed for 4m and 5m height).



WATER TANK HEIGHT MATCHES PANEL THICKNESS.

Height	Bottom Board	Side 1	Side 2	Side 3	Side 4	Side 5	Top board
1000mm	10mm	8mm					7mm
1500mm	10mm	10mm	8mm				7mm
2000mm	10mm	10mm	8mm				7mm
2500mm	12mm	12mm	10mm	8mm			7mm
3000mm	12mm	12mm	10mm	8mm			7mm
3500mm	14mm	14mm	12mm	10mm	8mm		7mm
4000mm	14mm	14mm	12mm	10mm	10mm		7mm
4500mm	16mm	16mm	14mm	12mm	10mm	8mm	7mm
5000mm	16mm	16mm	14mm	12mm	10mm	8mm	7mm

Tank Structure

☞ Panels

- ☀ The glass fiber panels enhance the tanks rigidity.
- ☀ The panels are a product of unsaturation resin, which is reinforced with fiberglass for extra strength.
- ☀ Thermal insulation helps to maintain a constant temperature within the tank, especially in areas with extreme temperature. It is optional to reinforce further the thermal insulation using a layer of polyurethane foam.
- ☀ The thickness and weight of the panels vary with the tank's height. The higher the tanks, the thicker the bottom panels.
- ☀ A standard panel is typically 1000 x 1000mm, 1000 x 500mm, 1000 x 1500mm, 2000 x 1000mm, 500 x 500mm.



☞ Bolts and nuts

The bolts, nuts and other fasteners that hold the GRP tank together are hot-dip galvanized. This means that they are adequately coated to prevent corrosion. The internal and roof bolts are hot dip galvanized or stainless steel



👉 Internal Tie Rod

The external tie rod system is hot dip galvanized.
The internal tie rod is also hot dip galvanized or stainless steel

👉 Sealant

The sealant is a product of high density, non-toxic
PVC foam

👉 Tank Support/ Skid Base

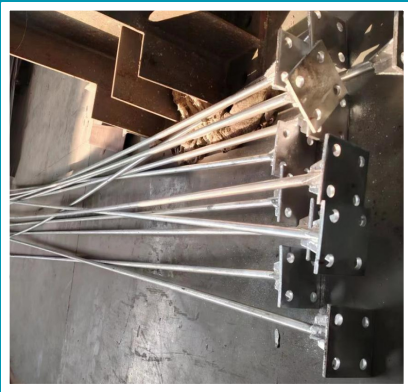
The beams and framework are hot dip-galvanized

👉 Ladder

The external ladder is hot-dip galvanized steel
while the internal ladder is made of standard 304
stainless steel or hot-dip galvanized steel .



Base channel



Side Angle



Bolts



Silicon



level indicator



Sealant



Flange



Support



Plugging Angle



Tiepiece Panel



ladder



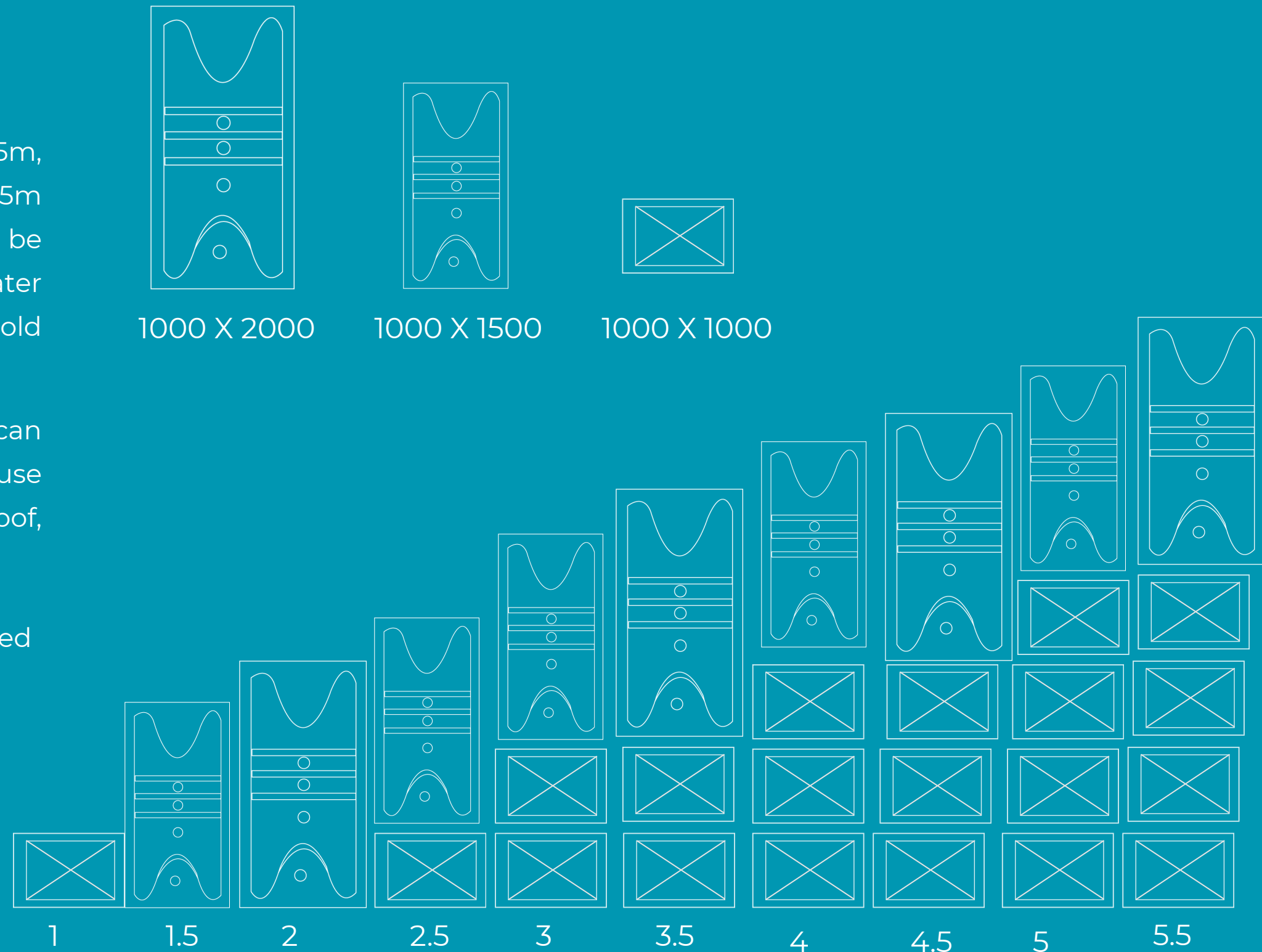
Side Angle

PANEL SIZE AND HEIGHT

Common panel sizes include 2mx1m, 2mx0.5m, 1.5mx1m, 1.5mx0.5m, 1m x 1m, 1m x 0.5m, and 0.5m x 0.5m. GRP panel type water tanks can be equipped with insulation to maintain stable water temperatures and prevent freezing in cold climates

In order to ensure the effective volume, panels can be designed to a shape which makes the most use of the space available. Panel types include roof, side and bottom panels.

The capacity of the panel tank can be selected from 0.25 M3 up to a maximum of 5,000 M3



SOME OF OUR PROJECTS AND REFERANCES

👉 Addis Ababa Chaka Project

👉 MESOB ONE STOP SHOP
SERVICE CENTER

👉 Sidama construction works
corporation

👉 GLOBAL GENERAL CONSTRUCTION



4 X 3 X 2 = 24 M3



3 X 2 X 1 = 6 M3



2.5 X 2 X 1 = 5 M3



5 X 3 X 2 = 30 M3



Meet our team

Our expert team is here to assist you with all your water tank needs. Whether you require guidance on selecting the right tank, installation advice, or customized solutions, we're ready to help.

End-to-End Service

-  Inquiry & Consultation
-  Site Assessment & Design
-  Quotation & Agreement
-  Delivery & Logistics
-  Installation & Testing
-  After-Sales Support & Maintenance

Get in Touch Now

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Mexico -Debrewerk Tower / Addis Ababa – Ethiopia



Every drop matters – Saving water begins with the right storage!