GRP Sectional Water Tank

Clean water, stored safely: sectional tanks of glass-fibre reinforced plastic (GRP), designed for the capacity you need, assembled on your site by our own engineers and maintained for years.



1 – 3,000 m³	1.0 – 6.0 m	up to 50 years	10 years
CAPACITY	WALL HEIGHT	SERVICE LIFE	LIMITED WARRANTY

Imported in parts, designed for your site

The panels and fittings are imported in parts from Korea and kept in our own warehouses in Tanzania, Kenya, Uganda and Sudan. From these standard 1 × 1 m modules our engineers design each tank for the customer's capacity and space — on the ground, on a roof or on a steel tower — then deliver and assemble it on site. More than 1,000 tanks are installed.

Why GRP

Corrosion-free. The inner part of the tank is 100 % GRP. Water or salt water does not affect it; no rust, rot, swelling or warping.

High strength, low weight. A far higher strength-to-weight ratio than steel: strong panels that are easy to transport and assemble.

Low maintenance. No painting needed. The material resists the growth of bacteria and algae, so cleaning is needed less often.

High water quality. No rust, no bacteria or algae on the walls: the water stays clean and healthy.

Keeps water cool. GRP conducts heat about 250 times less than steel (0.15 against 37 kcal/m·h·°C) — important in hot climates.

Heat resistant. Standard panels for water up to 50 °C; special panels up to 130 °C on request.

Leak-free joints. A special EVA sealing tape between the panels, and a dome-shaped bottom with a drain panel for complete, quick draining.

Up to 50 years. 100 % corrosion-free material that stays clean and looks new without painting.

Shapes and options

Any shape and size

Square, rectangular, L-, C- or O-shaped — the modules fit basements, roofs and narrow sites.

Partition tanks

One tank, two compartments: e.g. drinking water and fire-fighting water. Uses confined space fully, costs less than two tanks and one compartment can be cleaned while the other stays in use.

Insulated panels

Three-layer panels with 25 mm polyurethane foam for extreme temperatures; they prevent condensation on the outside.

Inspection window

An optional window to check the water from outside, without a ladder.

Internal or external reinforcement

Stainless steel tie rods inside (standard) or a galvanised steel frame outside, chosen by size and site.





Materials

PART	MATERIAL
Wall, bottom, roof, drain and manhole panels	SMC (GRP), hot-press moulded, minimum 6 mm
Internal tie rods and brackets	Stainless steel 304 (PET-coated); 316 / 316L as option
Base frame, corner frame, external brackets, external ladder	SS41 steel, hot-dip galvanised
Bolts and nuts (M10, M12, M14)	Inside: stainless 304 / 316 · outside: galvanised, with rubber caps
Sealing	EVA or PVC foam tape — watertight and flexible
Internal ladder, roof support pipes	GRP
Foundation	Concrete pad (by the customer, to our drawing)

Design conditions

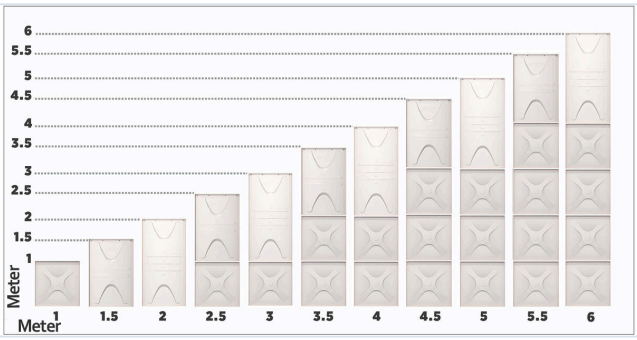
LOAD	DESIGN VALUE
Hydrostatic pressure	6 × the working water pressure
Deformation when full	less than 1 % of the tank height
Wind	up to 60 m/s
Earthquake	horizontal intensity kh = 1/3 g
Snow load	200 kg/m² (snow less than 1 m)
Fittings	no leakage under a vertical load of 100 kg on a 100 A fitting
Water temperature	up to 50 °C (special panels up to 130 °C)

Range

Capacity	1 – 3,000 m³ (1,000 – 3,000,000 litres)
Wall height	1.0 – 6.0 m, in steps of 0.5 m
Panel module	1 × 1 m (wall panels also 1 × 0.5 m)
Shapes	square, rectangular, L, C, O; partition tanks

GRP panel properties

Specific gravity	1.7 – 1.8
Tensile strength	min. 850 kg/cm²
Shear strength	min. 830 kg/cm²
Impact strength	min. 75 kg/cm²
Flexural modulus	12.0 GPa
Glass fibre content	over 30 % (BS 2782 part 10, method 1002)
Water absorption	under 0.20 %
Thermal conductivity / expansion	0.15 kcal/m·h·°C / 2.1 × 10^{-5} per °C
Hardness	Barcol over 40 · Shore D90
Light transmission	nil (BS 2782 part 11) — no algae growth



Wall heights from 1.0 to 6.0 m, built from 1 × 1 m and 1 × 0.5 m panels.

Standard accessories

Hinged manhole cover (60 × 60 cm, sealed lid) · internal ladder (GRP or stainless steel) · external ladder (galvanised steel) · screened air vents · water level indicator · inlet, outlet, overflow and drain nozzles to your pipe sizes · optional inspection window, float switch and level sensor.

Care

Keep a standard water level (the upper tie rods under water) · clean the inside at least twice a year with soft materials, never with thinner, acetone or chlorine bleach · when one compartment of a partition tank is cleaned, keep the other below half full. Our maintenance contract covers inspection and cleaning.

Contact

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