



C&L Water Tank Catalogue

C&L Fiberglass Construction Co., Ltd

Address : Room A, 7/F., Block D,
Chung Hing Industrial Mansion,
2-4, Lok Hop Street, San Po Kong,
Kowloon, Hong Kong.

Tel. No. : (852) 26726616

Fax. : (852) 26721428

E-mail : info@clfiberglass.com.hk

Website : <https://clfiberglass.com.hk>

C&L Fiberglass Construction Co., Ltd (Introduction)

C&L Fiberglass Construction Co., Ltd was established in 1976, specialized in fiberglass design, manufacturing and construction, with rich experience, excellent products, well received by users. Our major users include Ocean Park Hong Kong, Hong Kong Gas Corporation and Jardine Engineering Company Ltd. The company has involved in the fiberglass water tank business for many years. The products are durable and environmentally friendly. Products include single-piece, multi-piece, sectional and cylindrical water tanks. They are lightweight, suitable for restricted space such as pump room and roof area. Technicians only need to use light tools and install them quickly.

The company has always upheld a quality-oriented and customer-first business philosophy. As a result, the company's water tanks, as approved by the Hong Kong Water Authority (Water Services Department), are well received by users. In addition, the company's employees have many years of experience in fiberglass, which is a guarantee of 100% quality and confidence.



Mission Declaration

Since 1976, C&L Fiberglass Construction Co., Ltd. has aspired to become a leader in the industry, with an expertise in design, manufacture and construction of high-quality fiberglass products to serve our valued customers.

Our mission is to apply our expertise and experience in the design, manufacture and construction of composite products to promptly deliver the best quality products to our valued customers with innovative ideas.

Entrepreneurial spirit

People-oriented

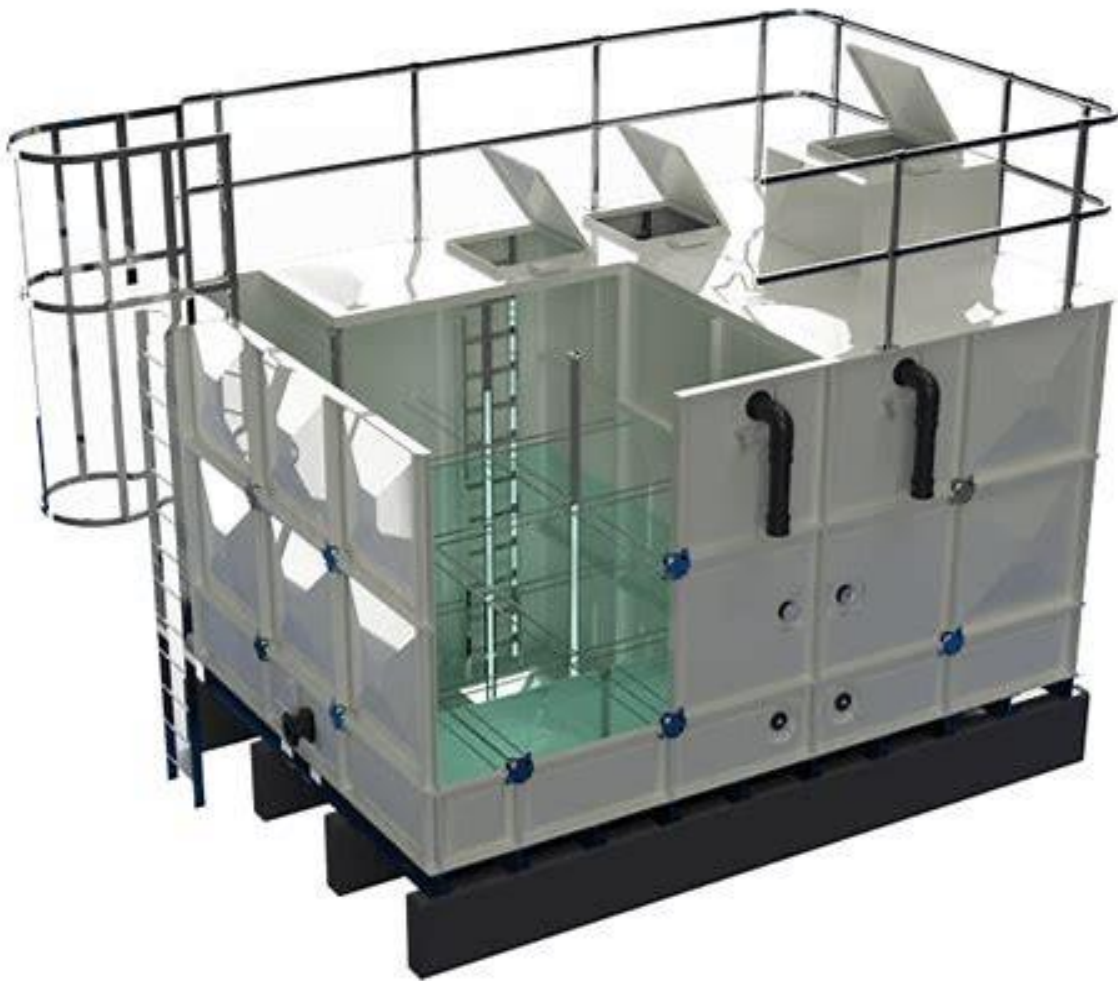
Customer-first

Concentrate on scientific research

Focus on innovation

Committed to environmental protection

Ensure safety



International standards

All water storage tanks are manufactured and installed according to the following international standards :

British Standard No. 3496 Part 1 and 3

British Standard No. 3479

British Standard No. 3691

British Standard No. 3749

British Standard No. 4994

British Standard No. 5422

British Standard No. 6399 Part 1

British Standard No. 7491 Parts 1 to 3

British Standard No. 13280

PNAP APP-100 for Authorized Persons in the Hong Kong Special Administrative Region



Mechanical data

FRP Panel

Specific gravity	1.5-1.7
Tensile strength	75 N/mm ²
Elongation	1.8%.
Tensile modulus	12600 N/mm ²
Compressive strength	102 N/mm ²
Flexural strength	194 N/mm ²
Flexural modulus	13000 N/mm ²
Shear strength	75 N/mm ²
Conductivity	18 kN/mm
Impact strength	70J/m
Barcol hardness	60 Min 40
Shore hardness	D90
Opacity	<0.2%.
Deformation	<1% or 10mm
Water Quality	Pass
Coefficient of thermal expansion	2.1x10 ⁻⁵ /°C
Thermal conductivity	0.15 w/m °C
Water absorption	0.01%.

Stainless Steel Parts and Accessories shall conform to BS 970 Grade 304 or 316

GMS Parts and Accessories shall conform to B.S. 729 or BS EN ISO 1460:1999

Hot Rolled Mild Steel Parts and Accessories shall conform to BS EN 10025 :1993

Advantages of fiberglass water tanks

Fiberglass water tanks are high-quality water storage equipment compared with other water tank materials. They are the best to store drinking water in a clean and hygienic way. They have excellent corrosion resistance, not easy to leak and with excellent thermal insulation performance. They are easy to install and disassemble, suitable for different sizes, and easy to maintain.

**Sectional GRP water tank**

Sectional water tanks are made by assembling high-grade, durable SMC fiberglass panels produced compression moulding by fixing them together. Standard unit size are 500 mm and 1000mm, or customized according to the size of the site. All internal and external accessories are made of durable stainless steel or galvanized mild steel. The interior ties of the tension bars are high-quality stainless steel or fiberglass. All water storage tanks are convenient to connect to the water pipe and additional connections can also be added according to the customer's requirements. C&L Fiberglass Construction Co., Ltd also supplies accessories, including internal and external ladders.

Particulars

Our products are manufactured strictly according to the British and EU standard BS EN 13280: 2001.

Our products are approved by the Hong Kong Water Services Department.

All water storage tanks are delivered with pre-drilled screw holes.

The roof is an approved product by the Hong Kong Water Services Department.

If required, we can drill extra holes for free in our factory.

Our technicians provide on-site inspection to measure the dimensions and provide professional advices.

The company offers schematic design structure calculations and measurements.

To ensure hygiene and easy cleaning to prevent growth of bacteria and moss, all internal surfaces of the water tank are smooth.

Our technicians can provide installation and site inspection reports.

Brand Name :

C&L Water Tank

Name of Manufacturer :

Wucheng Hengxin Air Conditioning Co. Ltd.

Country of Origin :

China.

Volume Range :

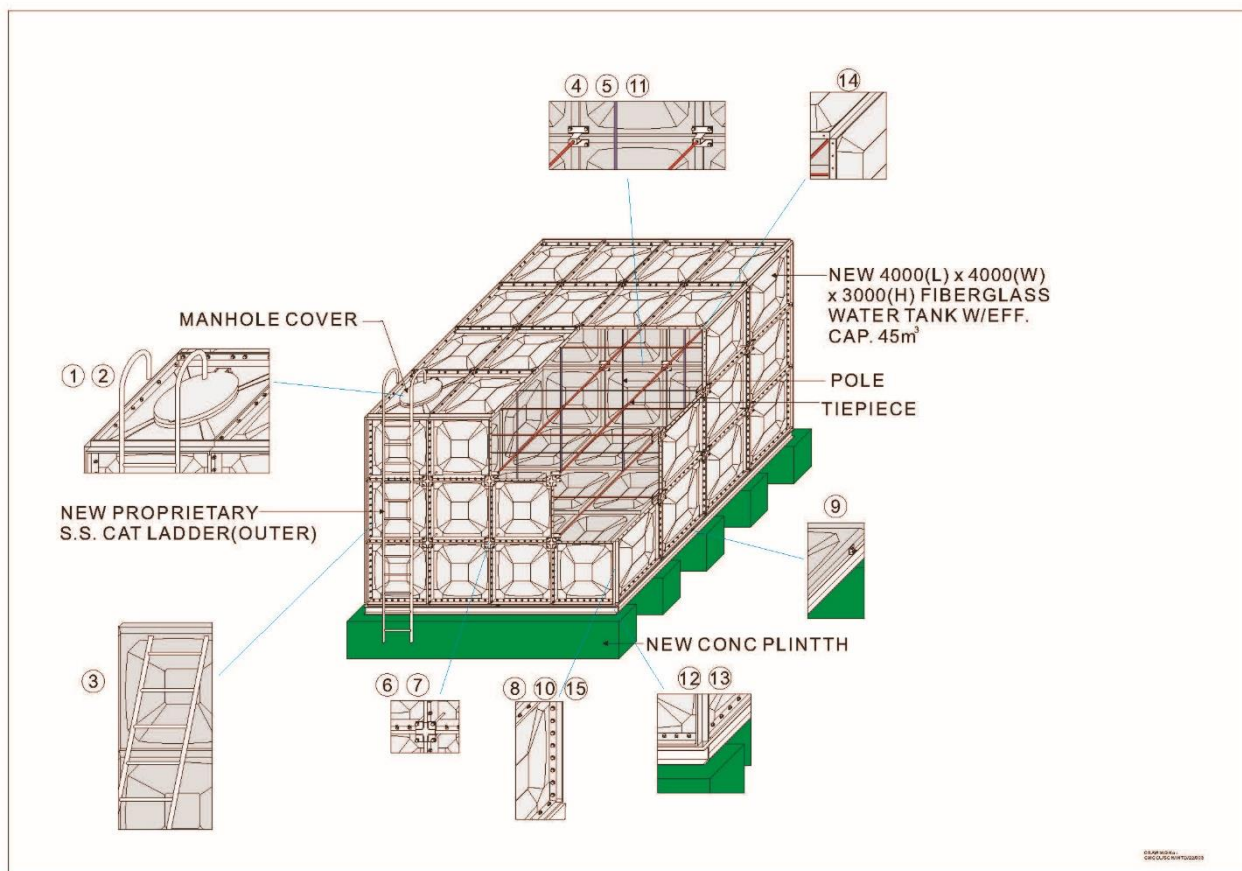
0.125m³ to 3125 m³

Model Name :

CLWT LxWxH (L=0.5~25m steps 0.5m, W=0.5~25m steps 0.5m, H=0.5~5m steps 0.5m)

e.g. Model CLWT 4x4x3 is a 4mx4mx3m Model

Accessories Materials



No.	Description	Materials
1.	Manhole Panel	GRP
2.	External Ladder	SS304 or SS316
3.	Internal Ladder	GRP
4.	Internal Tie Rod	SS304 or SS316
5.	Internal Bracket	SS304 or SS316
6.	External Frame	GMS
7.	External Bracket	GMS or SS304 or SS316
8.	Corner Bracket	GMS
9.	Bottom Bracket	GMS
10.	Corner Frame	GMS

No.	Description	Materials
11.	Roof Post	GRP (> 5m)
12.	External Roof Beam	GMS
13.	Base Frame	GMS
14.	Bolts and Nuts	
	Inside	SS304 or SS316
	Outside and Connections	GMS or SS304 or SS316
	Size	M10, M12, M14
	Sealing Tape	PVC Sealant, EVA Foam or Butyl
15.	Tank Panel	GRP

Features of Internally Reinforced System

Hygienic Considerations

- Internal tie-rods are coated with high grade SS 304 or 316 tie-rod is also available.
- Internal brackets are SS 304 or 316 brackets is also available.
- Top roof panels are supported by GRP Pultrusion section.
- Internal ladder are made in GRP in potable grade.

Aesthetically Pleasing

- External bolts in GMS fins are galvanized to prevent chlorine attack; SS 304 or SS316 bolts are also available.
- All water panels are machine pressed with uniform and consistent beige color gel-coat finishes.

Easy to Assemble

- Internal reinforcement optimized the structural form of the entire water tank system.
- No external frame means lesser space required.
- All connection bolt holes are cut out by automated machine with extreme precision.

Excellent Structural Stability

- Engineer design of the internal reinforcement system has been verified to be the most proficient way for GRP water tanks, which have been built in domestic and international sites for decades

Materials Characteristics

Hot Press GRP Panel

All GRP panels are produced in one piece by high pressure (+1000 ton machine) hot press moulding process which result in irregularity free and very consistent, and stable in dimensions. Connection holes are drilled with automatic machine to assure the spacing distances are within tolerances.

Joint Sealing, Bolts & Nuts

The sealing tape is made in top quality EVA, PVC & Butyl conforming to BS 6920-1: 2014. It is designed to withstand the extreme weather condition in long-term. Bolts, nuts and washers used for panels connection at inner tank shall be in stainless steel, while for those not in contact with water (external), hot-dipped galvanized mild steel (GMS) to BS-729 or BS EN ISO 1460:1999 could be used.

Internal Reinforcing Tie

The wall and roof of the GRP tanks is reinforced internally with stainless steel stays, tie and diagonal struts to provide strength and stability to the tank.

Roof Cover

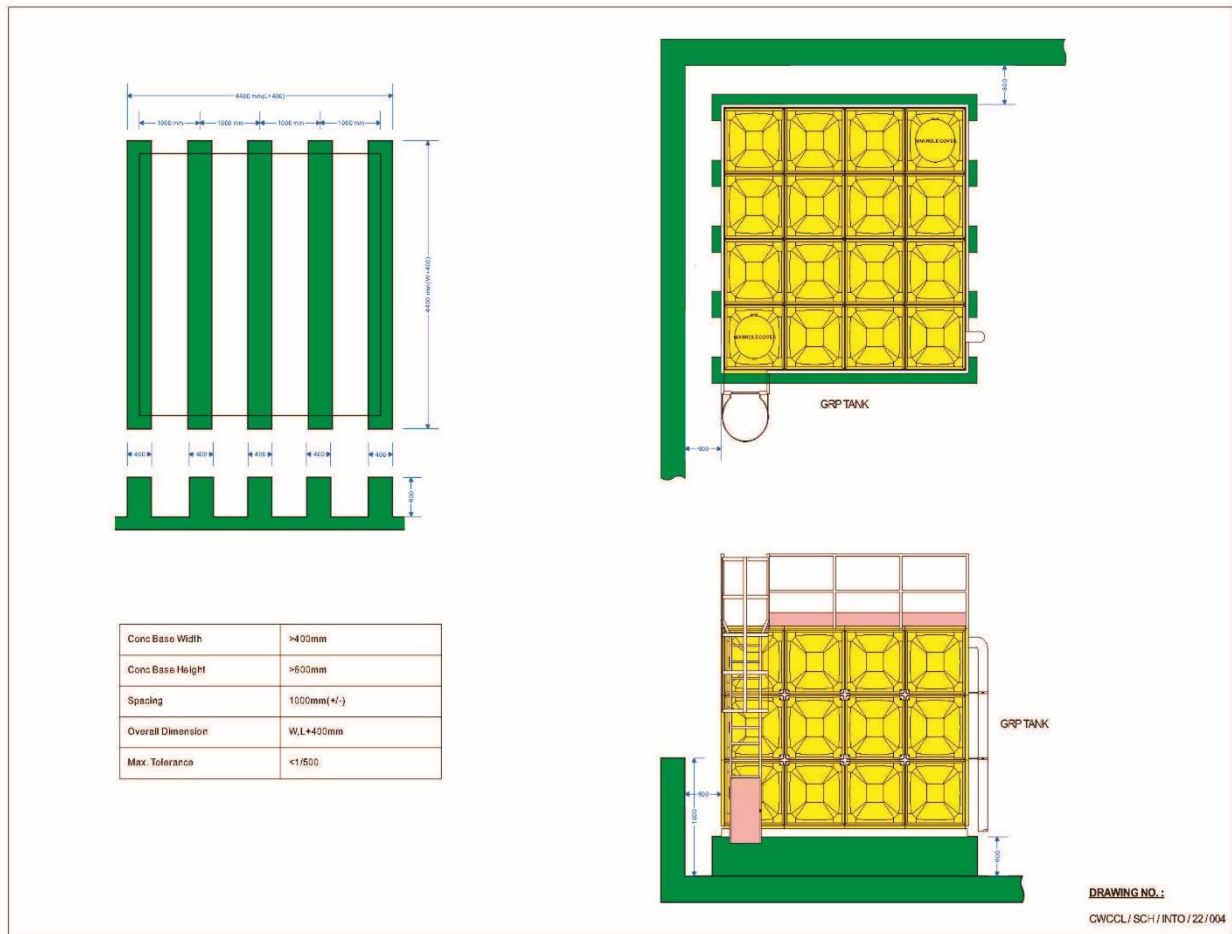
Heavy duty GRP roof panels are supported from the bottom panel with GRP tubular section or stainless steel post.

Support Frame & Base Frame

GMS or stainless steel support frame, brackets, plates and corner angles. Proof skid base frame system are made in GMS steel section at 1m spacing to both directions.

Accessories

- A. Manhole Cover with 600x600mm opening and sealed lid.
- B. Access Ladders: Inside tank - GRP or Stainless Steel Outside tank - GMS or Stainless Steel
- C. Screened Air Vents
- D. Water Level Indicator to show water level from outside (aluminum case cover). (Optional)



Concrete Base/Plinth Foundation

Standard Dimensions For maintenance of GRP tank, it is suggested that the minimum spacing between wall and tank is 600mm, while the minimum clearance from the ceiling is 1000mm.

Defining Scope of Works and Caution for Installation

Concrete Base PAD

Customers are required to construct the concrete base in according to the designed specifications and drawings.

Anchor bolts to be fixed by our agent.

Minimum compressive strength of the concrete base shall exceed 30MPa.

The thickness of the grouting mortar on the concrete base shall be less than 20mm.

Drainage & Fitting Connections

Customers shall specify the sizes and setting out of the sockets & fittings for P/D. Our agent will install the required sockets off-site. After the sockets are in place, the P/D connections shall be done by the customer.

Minimum Installation Space

It is recommended to reserve at least 600mm width space at the perimeter to the tank for installation and future maintenance.

Transportation

Panels are packed in pallet with cushions during shipping. Do not put heavy weight on the panel particular on the flanges.

Pipe Installation

Be careful not to put any heavy weight on the pipes that are connected to the fittings. Unbalance loads on the fitting during pipe installation will damage the sleeve and cause possible leakages. Take all necessary precaution and protection to avoid fire or other hazardous occurrences while welding.

Stagnant Water

If the tank is not used for long term, be sure to drain the water from tank, close and lock the access manhole. For potable water reservoir use, also refer to local government regulation. Clean the tank before reuse.

Maintenance, Inspection and Cleaning

C&L Water Tank are designed and manufactured for long-term service. Maintenance and inspection must be conducted regularly to ensure hygienic and long life performance. In order to facilitate easy and safe maintenance and inspection works, a proper access with adequate clearance shall be provided around the water tank.

Inspection and Maintenance works	Suggested frequency	Action / Remarks
Cleaning the Inner Side of the Tank	Once a year	Clean with cloth, sponge or other soft material. To avoid scratches to the GRP surfaces, never use rough materials such as wire brush or scuff pad.
Retighten Loose Bolts	Twice a year	Retighten loose bolts with hand wrench.
Clog up Air-vent and Over Flow	Once a year	Check for clog up and remove any foreign matters.
Manhole Cover	Once a month	Make sure the manhole cover is completely closed. Always keep the manhole cover locked.
Turbid Water	Once a month	Check the inner part of the tank, the outlet, inlet and other fittings for turbid water.
Water Leakage and Panel Deformation	Once a month	If leakage and deformation is found, contact the local sales representative immediately for rectification actions.
Corrosion of External Frame, Connection, Bolts and Ladder	Once a month	Replace the rusted bolts, apply rustproof coating or zinc-primer on the corroded steel frame, brackets and plates.

Whenever there is a typhoon, fire, flooding, turbid water contamination or other incident occurred, check the water tank and contact the sales representative for inspection.

Maintain 85% water level of water tank height at all times. If the tank of water is not used for a long time due to summer vacation, holiday or other reason, discharge the water before re-use.