

COMPANY PROFILE

**Its Our Pleasure To Introduce Ourselves As SEAQ BUILDING MATRIALS TRADING L.L.C.
That Has Been Continuously Providing Services for Supply &Installation of Grp Tanks and
Other Products Since Its Inception. SEAQ BUILDING MATRIALS TRADING L.L.C.
Was Established in 13-07-2014 As Supply in Grp Water Tank Register in Dubai, UAE.**

We are manufacturing GRP panels cold pressed molded, GRP cylindrical tanks GRP cabins, GRP septic tank, GRP demo, GRP manholes and GRP shade etc.

We have professional experts and team of fully expertise skilled workers competent to carry out technical works. considering the huge demand over GRP hot pressed molded panel tanks in uae, markets and GCC countries, we established a strong business relationship with:

SNB TECH . As Agent in The United Arab Emirates.

SNB Tech is becoming a world leader in Press Manufacturing Industries with endless and devoted efforts to develop innovative technologies and quality improvements. SNB Tech produces environmental friendly products such as GRP Water Tanks, BMC Artificial Marble and manhole cover. SNB TECH high efficient facilities and advanced technologies can meet all of our customer needs in qualities and safeties. To become a world leading company in Complex materials and construction materials, SNB Tech is investing more energy into its R and D department. All of products are produced under a strict quality control system and also guaranteed its qualities with a strict warrantee policy in order to give more confidences to customers. All members of SNB Tech are devoted to produce only the top quality products to meet all of our customers requirements. Our full dedication to manufacture better and efficient industrial materials is now creating and will generate more values and benefits to our noble customers. Our main products are GRP sectional panel water tank, SMC Water tank, BMC counter for kitchen, BMC raw material, GRP Manhole cover, BMC sink bowl,

OUR COMMITMENT:

- RELIABLE AND TRUSTWORTHY.
- PROFESSIONAL CUSTOMER SERVICE.
- QUICK SERVICE AND OUTSTANDING SOLUTION.
- INNOVATIVE DESIGN AND UNLIMITED RESOURCES.

OUR BUSINESS PRINCIPLES:

- TO SERVE WITH BEST OF OUR ABILITY. PROFESSIONALISM AND SINCERITY TO PROVIDE OPTIMUM SATISFACTION TO OUR PRODUCTS AND SERVICE WITH GUARANTEE AND WARRANTY.
- DEVELOP ENTIRE SERVICE WITH OUR MOTTO OF CUSTOMER COMES FIRST.
- TO CREATE CONDUCTIVE AND SAFE WORKING ENVIRONMENT WHERE YOUR EACH EMPLOYEE CAN ENRICH THEIR SKILLS AND POTENTIALITIES FOR BETTER CAREER AND PROFESSIONALISM.
- TO FORM A SOLID TEAM WORKS

APPLICATIONS:

- ✓ STORAGE OF PORTABLE WATER FOR DOMESTIC USE.
- ✓ STORAGE FOR TREATED OR PROCESSED WATER IN INDUSTRY AND UTILITY ORGANIZATION .
- ✓ STORAGE OF WATER FOR FIREFIGHTING OPERATIONS
- ✓ STORAGE OF POTABLE WATER IN COASTAL OR MOUNTAINOUS AREA OF EXTREMELY HOT OR COLD CLIMATE
- ✓ STORAGE OF WATER FOR IRRIGATION PURPOSE

ADVANTAGES OF PANEL WATER TANK:

- 100% SAFE FOR DRINKING WATER STORAGE
- VERY SMOOTH INTERNAL SURFACE THAT PREVENTS THE GROWTH OF BACTERIA, GERMS AND ALGAE
- STRONG AND LONG LASTING HAVING 10 YEARS WARRANTY
- IDEAL FOR STORING WATER IN EXTREMELY HOT OR COLD CLIMATIC REGION BECAUSE OF EXCELLENT HEAT INSULATION.
- LOW INSTALLATION COST AND MAINTENANCE.
- EASY TO DRAIN OUT WATER AND CLEAN THE TANKS
- REPLACEABLE OF PANELS IF DAMAGED IN A TANK
- COST SAVING TO BUILD TWO TANKS JOINED TOGETHER
- POSSIBLE TO EXTEND CAPACITY OF TANKS BY ENLARGING ITS SIZE.
- EASY TO INSTALL A PANEL TANK AND EVEN POSSIBLE TO DISASSEMBLE AND FIX IT IN ANOTHER LOCATION IF REQUIRED TO SHIFT THE TANK.

OUR PRODUCTS :

- **SNB TECH.**
GRP HOT PRESSED SECTIONAL WATER TANKS INSULATED AND NON INSULATED.

- **WARRANTY IT WILL BE 10 YEARS**
- **BEST MATERIAL USED IN TANKS**
- **WE CAN REFAX TANK IN MANY PLACE IF YOU WANT MOVE**
- **GRP TANK - EXTERNALLY SYSTEM**
- **GRP TANK – INTERNALLY SYSTEM**

- **SANGWON ENG CO., LTD .**

- **PIPECO TANKS .**

1. GRP HOT PRESSED SECTIONAL WATER TANKS INSULATED AND NON INSULATED
2. GRP COLD PRESSED SECTIONAL WATER TANKS NON-INSULATED – LOCAL.
3. GRP CYLINDRICAL UNDERGROUND OR ABOVE GROUND WATER TANKS.
4. GRP SEPTIC AND SOAK-AWAY CYLINDRICAL TANK.
5. GRP LINING FOR CONCRETE TANK (ANTI-FUNGAL-AND ANTI –BACTERIAL).
6. POLYETHYLENE WATER TANK (VERTICAL OR HORIZONTAL – 3,4,5 LAYERS).
7. FABRIC SHADING SYSTEM (KNITTED OR COATED).
8. PVC & PVDF SHADING SYSTEM (WATER PROOF).
9. ALUMINUM SHEET PROOFING (INSULATED AND NON-INSULATED).
10. CLEANING OF WATER TANKS.

SNB TECH. Is the Leading Company for Grp Water Tank and Others in South Korea Specially.

We have built our unparalleled beauty status the fields of GRP water tank and accessory
We are also emerging as a global supplier in the business, powered by our world class
innovation, products and services which customer, dealers and shareholders can trust and take
pride in.

Based on this, we will launch reverse osmosis water purifying system & photovoltaic system too.
In case of any further clarification and your query, please feel free to contact us.

REGARDS

SEAQ ELECTROMECHANICAL WORKS L.L.C

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SNB TECH

GRP Sectional Panel Water Tank



S&B



سياق للأعمال الكهروميكانيكية ش.ذ.م.م
SEAO ELECTROMECHANICAL WORKS L.L.C

WRAS
APPROVED
PRODUCT

S&B



SNB TECH



Test for 1m x 1m x 4mH

● Physical property

SNB panel and reinforced parts confirmed by a stric quality standard

ITEM	VALUE
Tensile strength	99.5MPa
Flexural Strength	165MPa
Flexural Modulus of Elasticity	13800MPa
Specific Gravity	1.80
Barcol Hardness	70
Absorption Rate	0.01%
Glass Fiber Content	32.1%
Odor & Taste	No Defects
Turbidity	Below 0.5 degree
Color	Below 1 degree
Light Transmission	Nil
Heavy Metals	Not Detected
Consumption of KMnO4	0.3mg/L
pH(20°C)	6.9
Phenol	Not Detected

CEO Message

We are pleased to introduce SNB Tech Co., Ltd. as a dedicated manufacturer of GRP products in South Korea. We are a front-runner in the creation of a better living environment using high technology, the newest facilities and high-quality manufacturing capabilities. Based on unsaturated polyester, we manufacture GRP sectional panel for water tank and artificial stone such as Sink top, Sink bowl, Bath tube, Ceiling panel by huge hydraulic press

Always we think over our customers as we do our own family, working hard to cultivate the health and living environment-oriented business. We will grow up as a world-renowned superior enterprise, realizing the best in customer satisfaction by providing excellent products and services for the living environment, and by establishing corporate and organizational cultures suitable for the global environment. Thank you.

Sincerely yours

CEO BongKi Lee



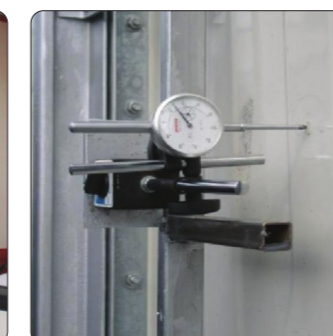
Hydraulic Press Machine



Products



Analysis for raw material



Test for Panel Transformation



Test for Hydraulic Pressure

Process of erection **SNB** GRP sectional water tank



1 Charge SMC sheet on the mould



2 Molded by hot hydraulic press



3 Inspect GRP panel



4 Drill on the GRP panel



5 Concrete foundation for the erection of water tank



6 Assemble bottom panel



7 Erect wall and partition panel



8 Assemble roof panel and manhole



Delivered high quality products to global customers

It is the time for you enjoy SNB water tank with best Quality and leading Technology.



Tank Size 6m x 6m x 2mH : 72 Ton



Tank Size 16m x 17m x 4mH : 1088 Ton



Tank Size 7m x 8m x 3mH : 168 Ton



Tank Size 7m x 9m x 2mH : 126 Ton



Tank Size 9m x 25m x 4mH : 900 Ton



Tank Size 6m x (3+3)m x 2mH : 72 Ton

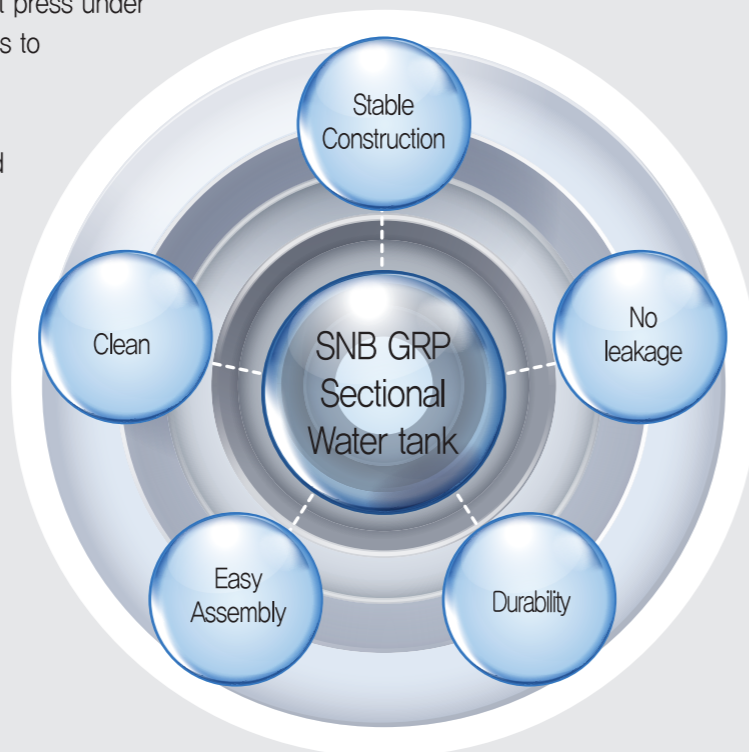


What is SNB GRP Water Tank?

GRP Sectional Panel Tanks are constructed of panels made from SMC(Sheet Molding Compound) by hydraulic hot press under high temperature (150°C) and pressure conditions to maintain the best endurance.

Using stainless steel for the interior structure and plated steel for the exterior, the panel exhibits excellent resistance to erosion.

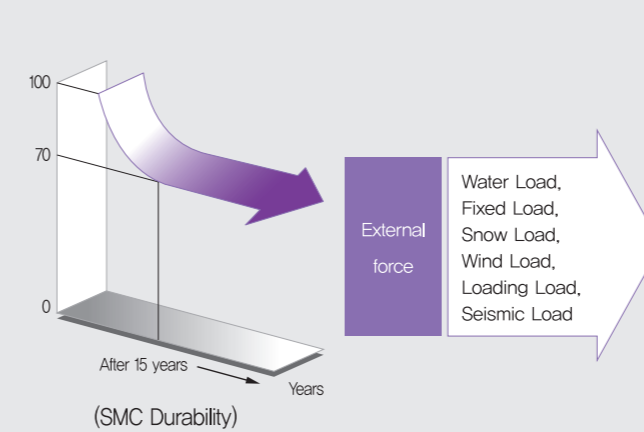
Easy installation with on-site bolt assembly and Tank shape and volume can be freely designed with no restrictions based on site location, weather or climate.



Structural Analysis of SNB GRP Panel

SNB GRP water tanks are designed to be the safest panels through optimized design.

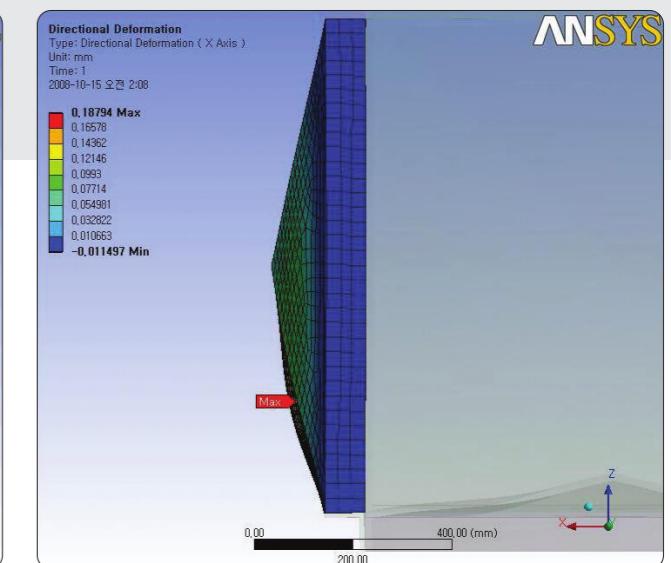
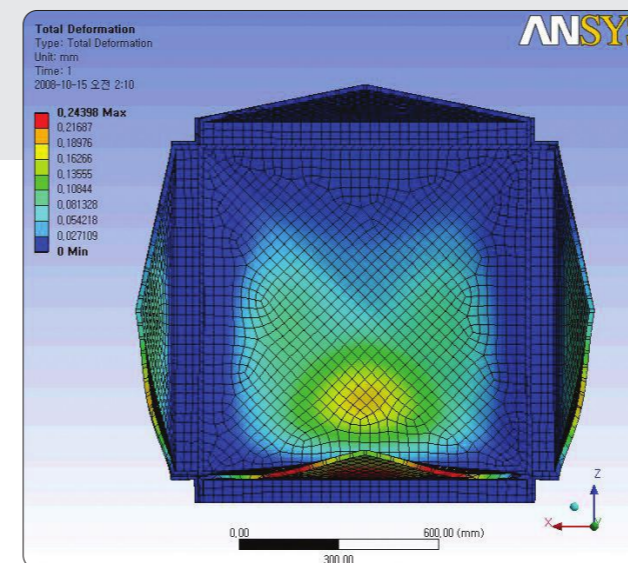
If the panels are reliable, the cost of reinforcement can be reduced and the best water tanks can be made at the most economic cost.



Design Basis : External force < Maximum feature / Safety Factor

Item	Design Condition
Seismic load	horizontal Seismic $K_h = 2/3$ Vertical $K_v = 1/3$ Designed bases on $K_h = 1/3G$, horizontal seismic load.
Hydrostatic Pressure	Water Level [Height in Meters] x 0.1KGF/cm ² [0.01MPa] Designed to stand against hydrostatic pressure enough The max. change of side wall is less than 1.0% of total height left in Water for 48 hours.
Snow Load	60 kgf/m ² [at the base of 30cm of snow depth] Designed to stand under 200kg/m ² enough
Wind Load	Wind Load – 255 kgf/m ² [2.55 x 10 ⁻³ Mpa] Designed to stand under max, 60m/sec even in case tank dose not include water.
Illumination	Illumination – Under 0.1%
Water Temperature	Under 30°C (normal) / Under 50°C (maximum) (Special making in case of thermal spring)

Structural Design of wall panel (1m X1m)



COMPARISON : SNB GRP panel type vs Other types

	Water quality	Water tightness	Durability	Transportation	Maintenance	Anti-corrosion	Installation
SNB GRP Panel tank	◎	◎	○	◎	◎	◎	◎
Concrete Tank	X	△	△	X	X	◎	△
Steel Tank	△	◎	○	△	X	X	X
Stainless Steel Tank	◎	◎	○	△	△	△	X
GRP Hand Lay-up tank	△	◎	○	X	△	◎	○

◎ : Very good ○ : Good △ : Normal X : Poor

※ It is possible that the roof panel of stainless steel tank get rust by high concentration of chlorine contents



Various Shape and Size of SNB GRP Panel

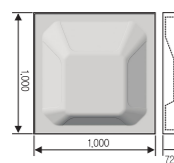


● Own designed GRP panel

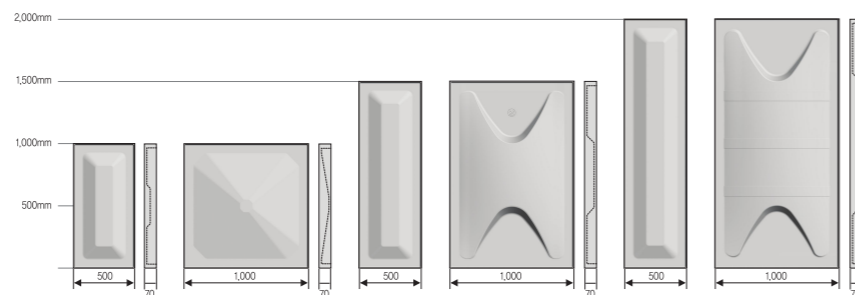
* SNB produces own designed panels and provides various panels such as partition, manhole, flange and drain by purpose.

* All panels designed with different thickness by water pressure.

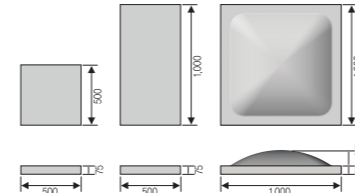
● Exclusive designed panel for connecting Flange and Drainage.



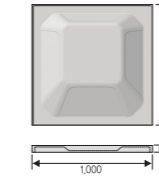
● Various design for wall Panel



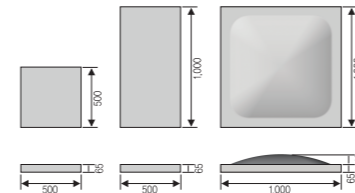
● Bottom Panel



● Drain Panel



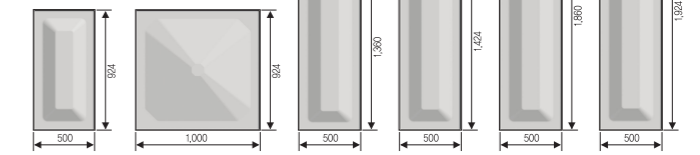
● Roof Panel



● Manhole Panel



● Partition Panel



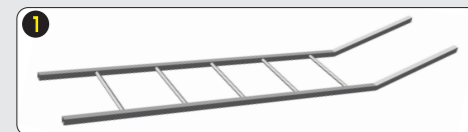
GRP water tank Internal reinforcement structure



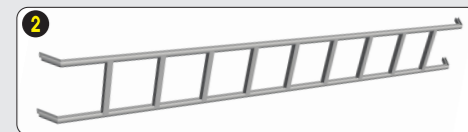
Manhole (Ø750)



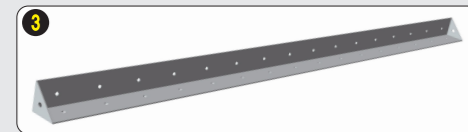
Air Vent



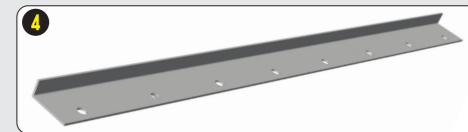
External Ladder (HDG)



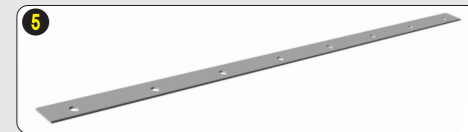
Internal Ladder (GRP)



Corner Frame (HDG)



External Flange Bar - Angle (HDG)



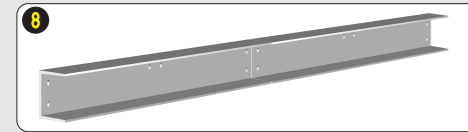
External Flange Bar - Flat (HDG)



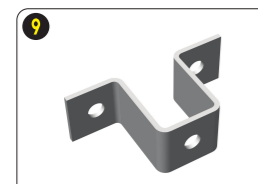
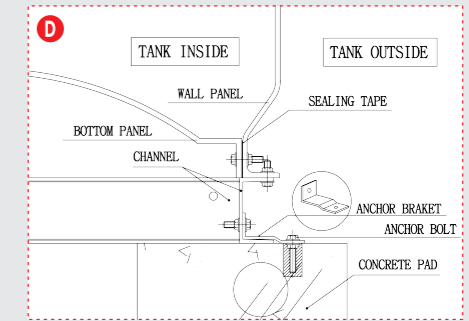
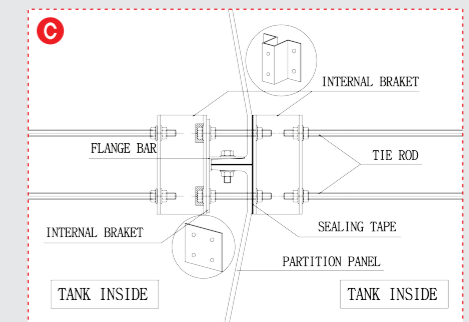
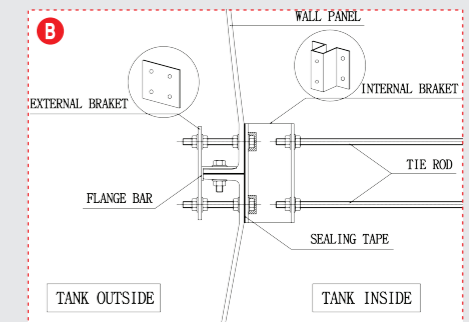
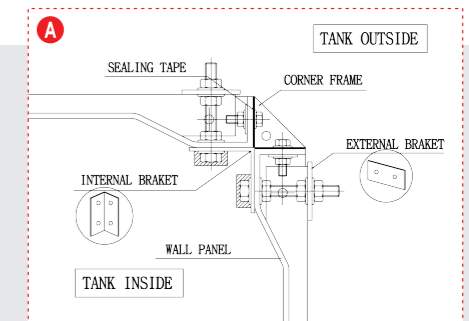
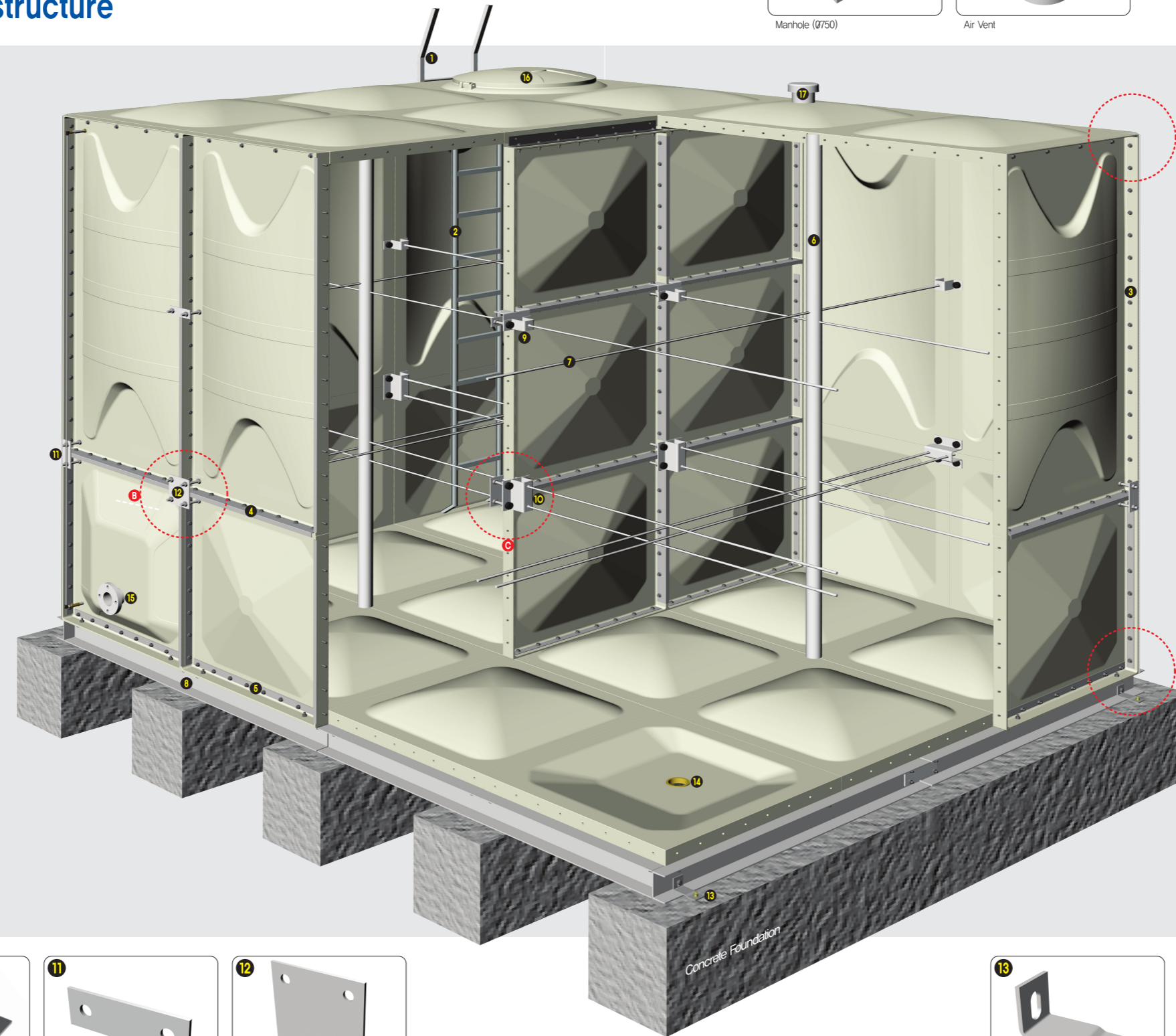
Roof Supporter (PVC)



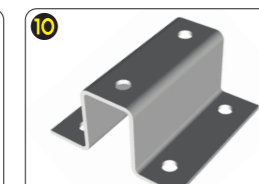
Tie Rod



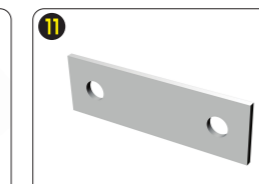
Steel Skid Base - Channel (HDG)



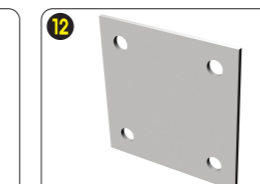
Internal Bracket for Tie Rod



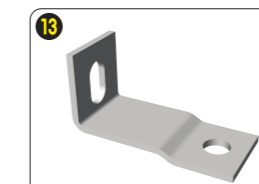
Internal Bracket for Tie Rod



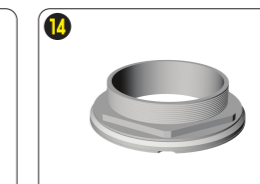
Internal / External Bracket



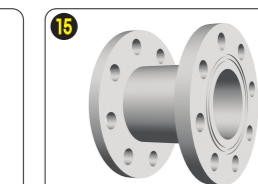
Internal / External Bracket



Anchor Bracket



Brass Socket



Flat Flange

Hygienic Panel

SNB panel which is possible to make the GRP panels in a variety of colours.
 In most cases, however, this type of tank is installed in the open, exposed to direct sunlight.
 If the GRP panels are translucent, the growth of algae and other micro-organisms would be accelerated.
 After extensive testing and research, SNB has adopted panel to minimize this problem, completely opaque and does not permit the passage of any light through it.
 A typical problem with steel tanks has always been the high thermal conductivity and expansion of coefficient of steel. These characteristics can cause loosening of the panel connecting bolts in areas of wide temperature change



Cracked surface for Concrete water tank after 3 years installation

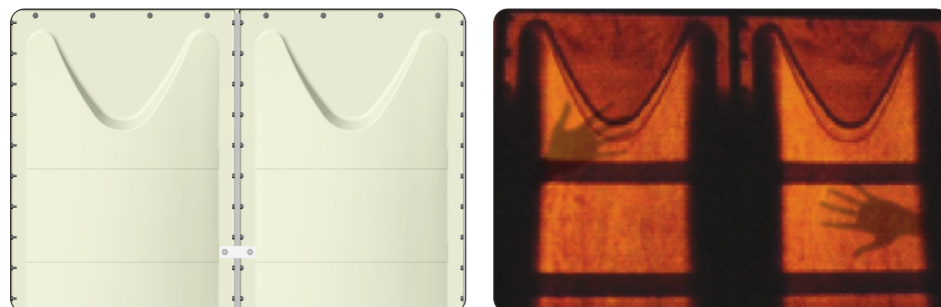


Rusted steel for STS Water tank after 3 years installation



Inside state of SNB GRP Water tank after 3 years installation

Blocked penetration of light to prevent algae growth



Various design by water tank capacity

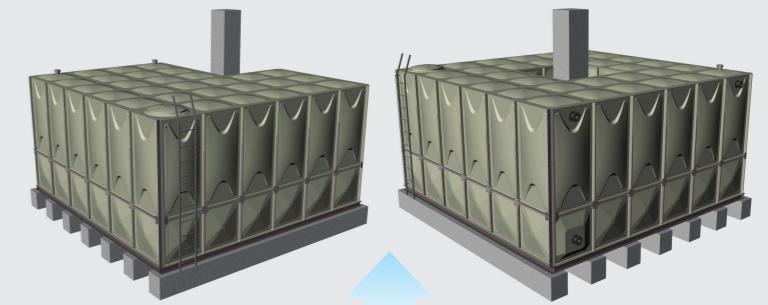
Various sized panels can make the below tanks that utilize the most horizontal & perpendicular space and also can be erected from small capacity tank to huge tank.



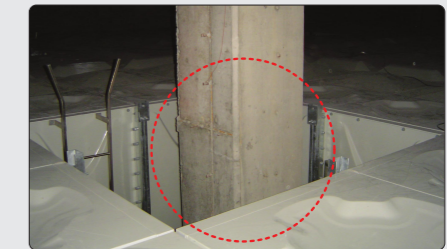
1,000 Liter for home



90,000 Liter for industry

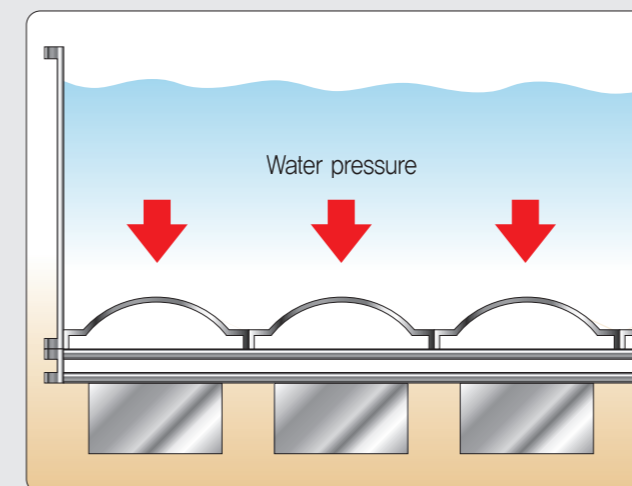


1,080,000 Liter big project

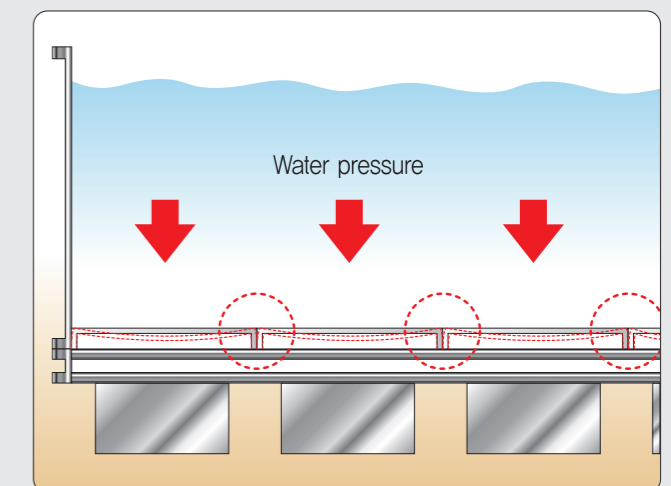


Safety of water pressure

The convex bottom panel can be the water pressure created by filling the tank seals the joints preventing leakage. In other type tanks, water pressure can loosen the joints breaking the seal, and allowing the stored water to leak out.



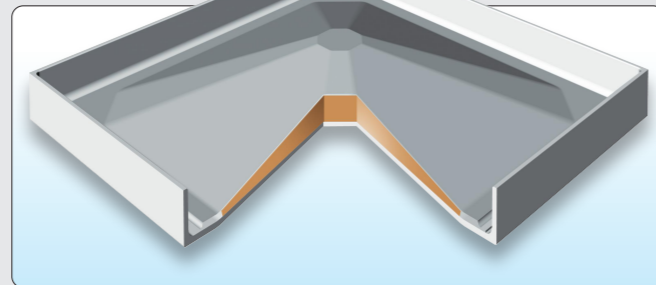
SNB convex bottom panel



General bottom panel

Excellent Insulation

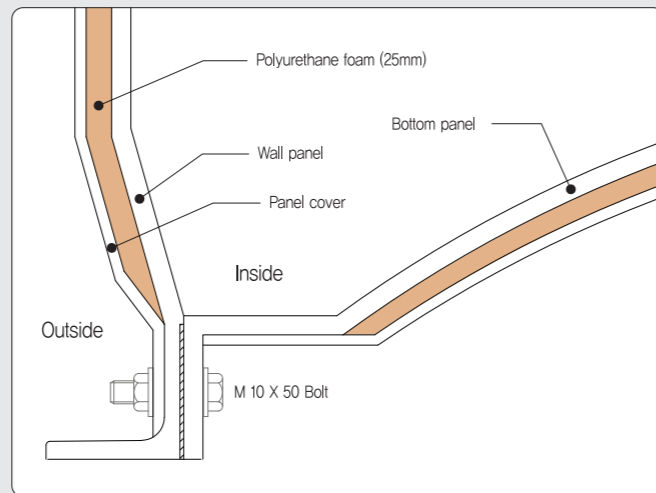
The heat insulation panel with 3 layers structure improves heat insulation effect, protects water condensation on the outside of the tank and minimizes temperature variation of the stored water.



Comparison of Thermal Conductivity

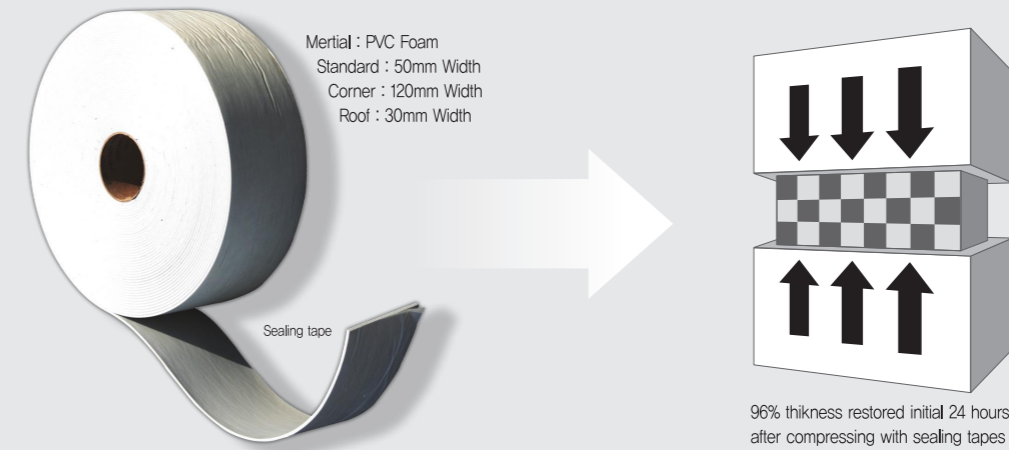
Tank type	Thermal Conductivity Kcal / m.hr°C (j / m hr°C)
STEEL	37.0 (1,55 X 100,000)
GRP (Non-insulated)	0.15 (630)
GRP (Insulated)	0.02 (84)

Tank type	Coefficient of Overall Thermal Transmission Kcal / m².hr°C (j / m² hr°C)	
	Air - Panel - Air	Water -Panel -Air
STEEL	14.3 (59.9)	24 (100)
GRP (Non-insulated)	3.0 (13)	5 (21)
GRP (Insulated)	0.9 (3.8)	1 (4)



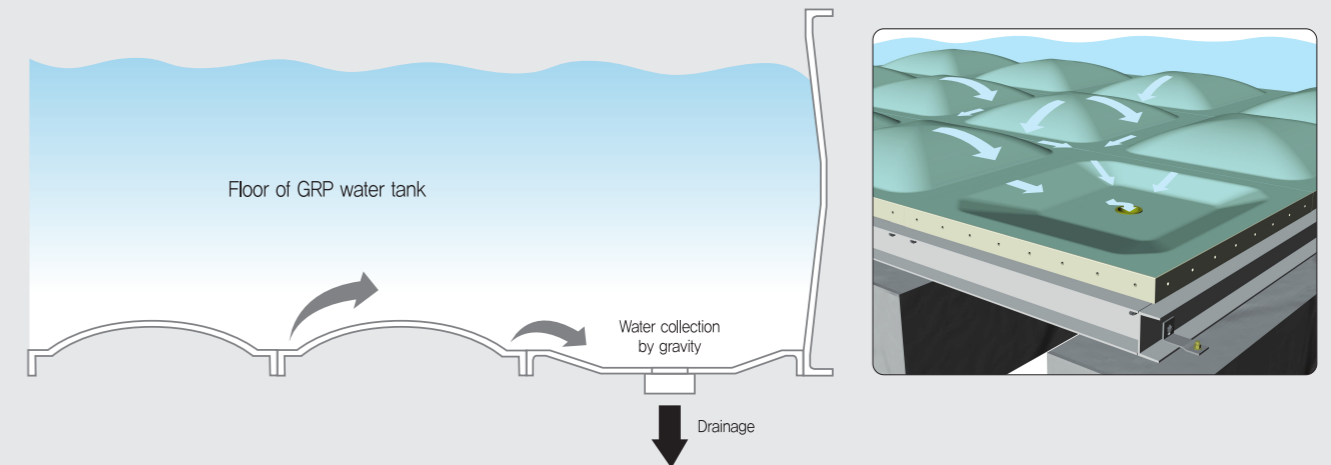
Water Tightness

The joints are sealed with a special sealing tape for GRP sectional panel water tank with long experience and technology. It maintains soft itself and adhesives even at low temperature. The combined flange thickness at the panel joints is sufficient to meet any stress imposed. This self-sealing feature eliminates the possibility of separation and hence prevents water leakage of the tank.

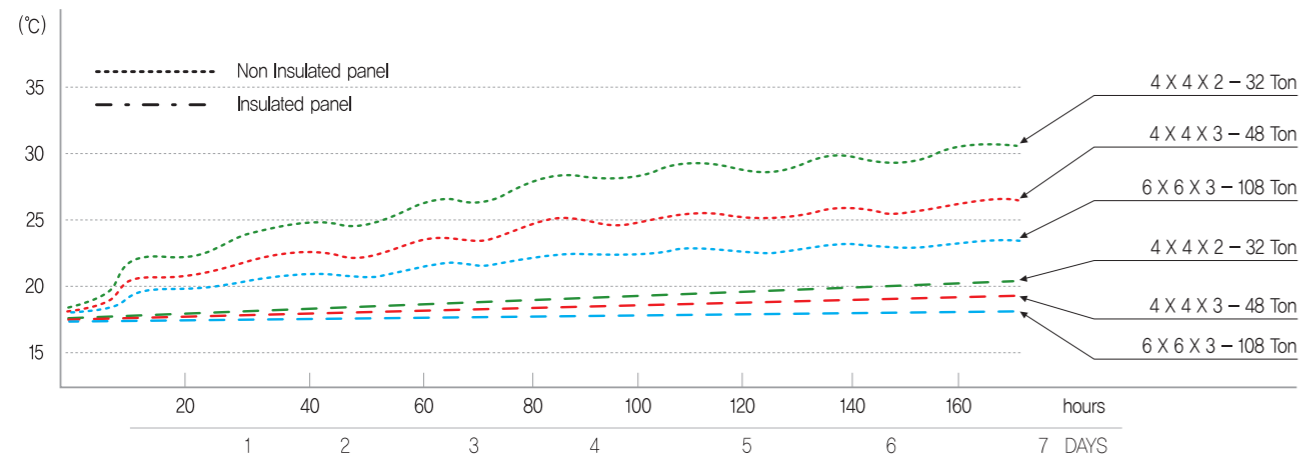


Complete Drainage

The convex bottom panels with a concave drain panel system make sure complete and fast drainage. It's very useful to take a maintenance inside of water tank.



Temperature curve for inside water tank



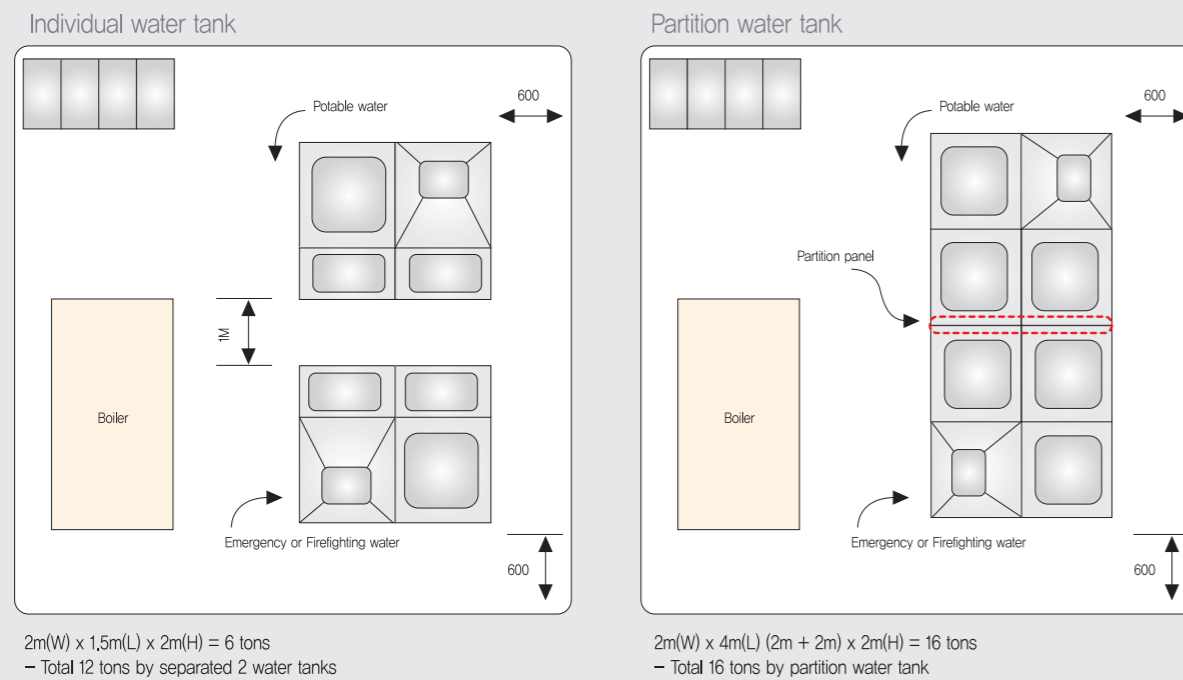
Partition Water Tank

Suitable for the confined area

The water tank for two different purposes are needed in a confined area or boiler facility.

As an example 16 tons water tank, the partition type can be divided by two tanks in one as using half(8 tons) for drinking water and another half(8 tons) for service water.

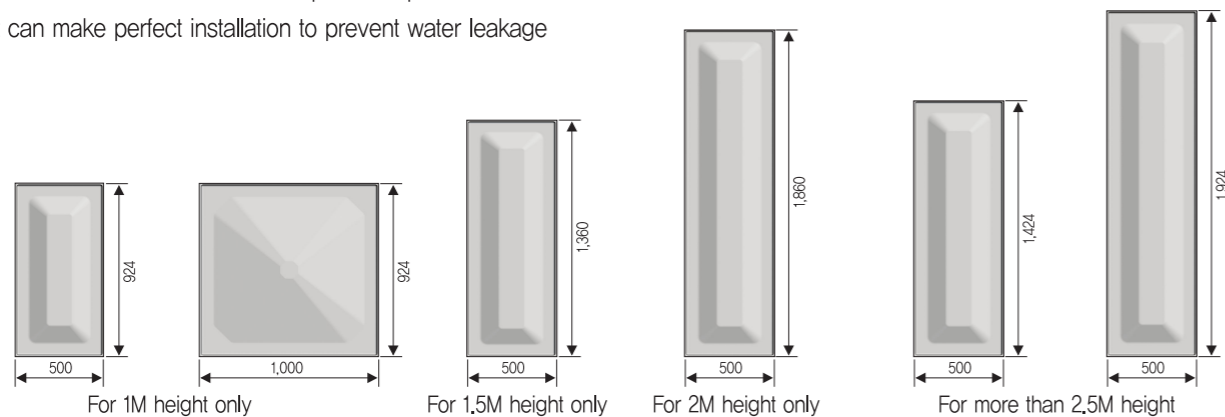
If the separated water tank installed as shown on the below picture, you have to install two different tanks with a maximum each 6 tons, because you need to keep 1 meter distance between each separated tanks for maintenance and operating space.



● Various panel size for partition type water tank

SNB has exclusive partition panel according to the various size of different height and width so it doesn't need to cut the another panel for partition.

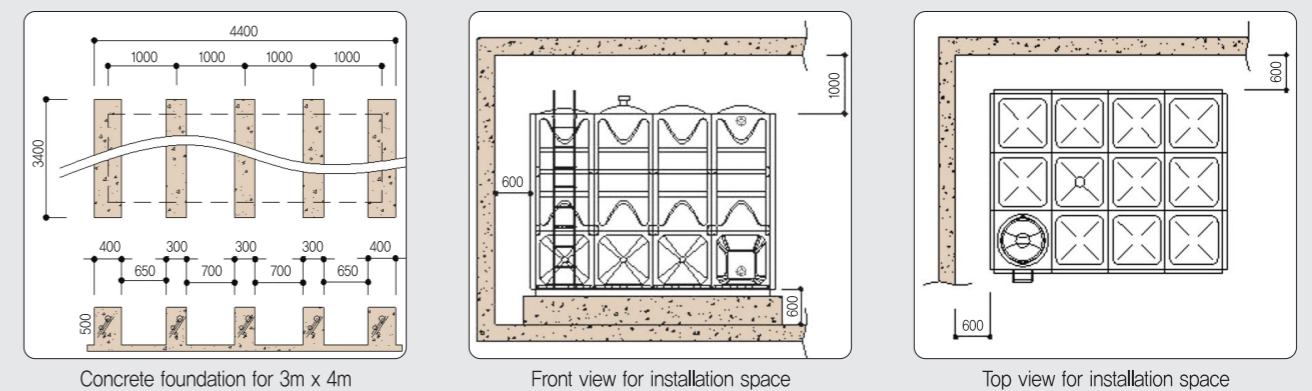
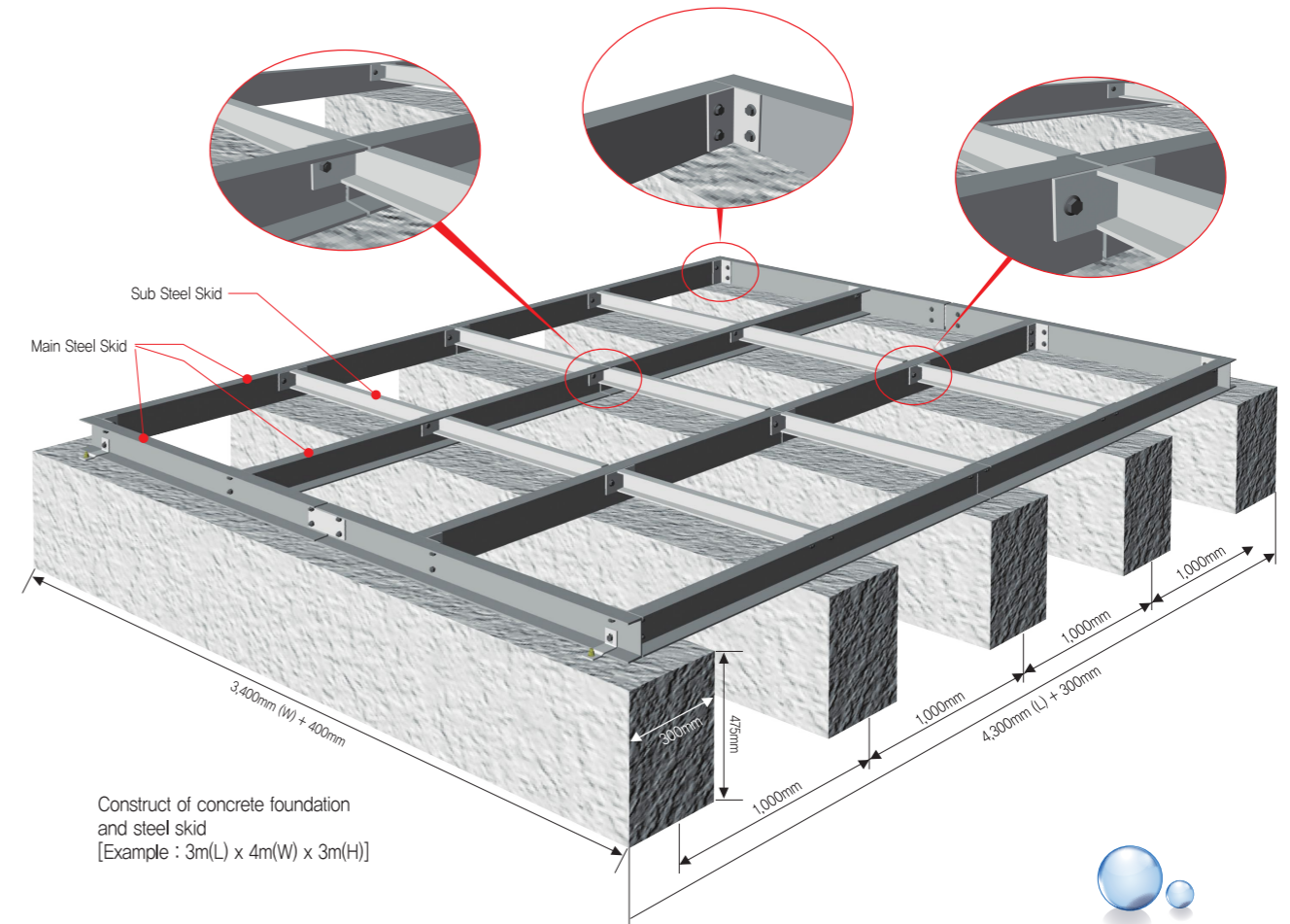
It can make perfect installation to prevent water leakage



Concrete Foundation & Steel Skid



- Customers should construct a concrete foundation according to the designated water tank specification and the firmness of the site.
- The strength of the base concrete should be at least 180kg/cm²
- The thickness of mortar on the base concrete should be less than 20mm



Specification of steel skid

1. Durability reinforcement parts by optimized structural designed
2. Providing all accessories to able erect water tank at construction site
3. Safety construct by bolt assembly without welding and make a short construction period and reduce the cost

Tank Height	Steel skid A (Main)		Steel skid B (Sub)	
Height 1m ~ 2.5m	angle 75 X 75 X 6mm		channel 75 X 40 X 3mm	
Height 3m ~ 4m	channel 125 X 65 X 6.5 X 8mm		channel 75 X 40 X 6mm	
Height 4.5m ~ 5m	channel 150 X 75 X 8 X 10mm		channel 100 X 50 X 6mm	

※ The above list is recommendable standard. It can be redesigned by customer's requirement and condition of construction site.

◆ Steel skid assembly by Angle type

	Steel skid A	Steel skid B
1M	1140L	990L
1.5M	1640L	957L / 527L
2M	2140L	957L / 1027L
2.5M	1570L / 1070R	957L / 563L / 957L
3M	1570L / 1570R	957L / 1063L / 957L
3.5M	1570L / 2070R	957L / 994L / 563L / 957L
4M	2070L / 2070R	957L / 994L / 1063L / 957L
5M	2070L / 1000L / 2070L	957L / 994L / 1063L / 994L / 957L

◆ Steel skid assembly by Channel type

	Steel skid A	Steel skid B
1M	1120L	990L
1.5M	1620L	962L / 527L
2M	2120L	962L / 1021L
2.5M	1560L / 1060R	962L / 553L / 962L
3M	1560L / 1560R	962L / 1053L / 962L
3.5M	1560L / 2060R	962L / 994L / 553L / 962L
4M	2060L / 2060R	962L / 994L / 1053L / 962L
5M	2060L / 1000L / 2060L	962L / 994L / 1053L / 994L / 962L

Specification of connection



1. Specification of connection

- Able to supply all installation accessories including connection by customer's requirement
- Customer should inform the specification of inlet, outlet, drain and overflow size.
- The below list is for SNB standard connection for customer's reference

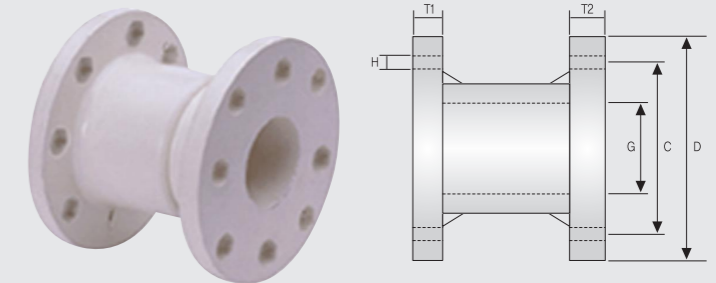
Standard Connection Size

Water tank capacity(m³)	Inlet	Outlet	Overflow	Drain
1m³ ~ 10m³	25A	50A	50A	25A
11m³ ~ 20m³	40A	50A	50A	40A
21m³ ~ 50m³	50A	65A	65A	40A
51m³ ~ 100m³	65A	80A	80A	50A
101m³ ~ 200m³	80A	100A	100A	50A
201m³ ~ 500m³	100A	125A	125A	80A
501m³ ~	125A	150A	150A	80A

2. Connection line-up

◆ Flange Type (PVC)

mm / inch	D	T1	T2	G	L	C	Hole
65A (2½)	175	20	25	77	140	140	4
80A (3)	185	20	25	90	140	150	8
100A (4)	210	20	25	115	140	175	8
125A (5)	250	20	25	140	140	210	8
150A (6)	280	20	25	170	140	240	8
200A (8)	330	22	25	220	150	290	12
250A (10)	400	24	25	270	170	355	12
300A (12)	445	24	25	320	170	400	16



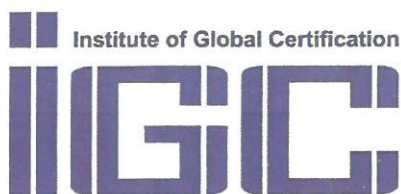
◆ Socket Type (Brass)

mm / inch	D	D1	L	T
15A	43	19	26	1.5
20A	46	25	30	1.5
25A (1)	53	31	32	1.5
32A (1½)	66	39	35	1.5
40A (1½)	73	45	36	1.5
50A (2)	85	57	40	1.5
65A (2½)	111	72	46	2



Caution for the connection

- Install a prop while installing piping and take care not to put an excessive load
- Install pipes on the site where the tank is located and take care not to put on the biased load



Management System Certification Body No. MSCB-105

CERTIFICATE

No. 18-A-0054 IGC

This is to certify that the Quality Management System of

S&B Tech Co., Ltd.

of

99-129, Gahyeon-ro 85beon-gil, Tongjin-eup, Gimpo-si, Gyeonggi-do, Korea

Company Reg. No.: 137-86-13607

has implemented and documented a quality management system in compliance with the requirements of the standard

ISO 9001:2015

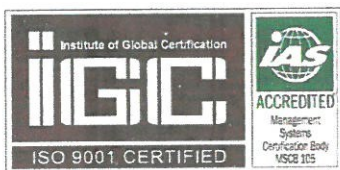
for

- Design, Development and Manufacture of SMC Water Tank
- Design, Development and Manufacture of Press Molded Product
(Solid Surfaces, Manhole Covers)

The certificate is issued on the basis of the results mentioned in the pertinent audit report. Validity of the certificate is conditionally limited by positive results of surveillance audits, which the certified company committed to undergo.

This certificate can be invalid if the certificate holder does not fulfill the conditions set out in the certification agreement.

Initial issue date: Oct. 19. 2015
 Re-issue date: Sep. 12. 2018
 Expire date: Oct. 18. 2021



Betty, Kim
Head of Certification Body

Approval Number 2107514
Test Report: M107120



Water Regulations Advisory Scheme Ltd.
Unit 13,
Willow Road,
Pen y Fan Industrial Estate,
Crumlin,
Gwent,
NP11 4EG

8th July 2021

SNB Tech. Co. Ltd
99-129, Gahyeon-ro 85 Beon-gil,
Tongjin-eup,
Gimpo-si,
Gyeonggi-do,
Korea, Republic of

**WATER REGULATIONS ADVISORY SCHEME LTD. (WRAS)
MATERIAL APPROVAL**

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS6920-1:2000 and/or 2014 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

GLASS REINFORCED PLASTICS (GRP)- COMPONENTS.

5120

'SNB GRP Panel'. Beige coloured, hot press moulded GRP panel. For use with water up to 50° C.

APPROVAL NUMBER: 2107514
APPROVAL HOLDER: SNB TECH. CO. LTD

The Scheme reserves the right to review approval.
Approval 2107514 is valid between July 2021 and July 2026

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wrasapprovals.co.uk/approvals-directory/

Yours Faithfully

A handwritten signature in blue ink, appearing to read 'Ian Hughes', written in a cursive style.

Ian Hughes
WRAS Approvals Manager

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that NO changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.