



مصنع النجوم للخزانات البلاستيكية (ذ.م.م.)  
Stars Poly Storage Tanks Factory (L.L.C.)

## PRODUCT CATALOG

Certified by:





**PRODUCT CATALOG**

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# COMPANY PROFILE

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## NAME: STARS POLY STORAGE TANKS FACTORY L.L.C.

### BACKGROUND

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Stars Poly Storage Tanks Factory L.L.C. was formed in 1998 in Dubai, our primary objective is to provide high-quality products and services to organizations and companies in United Arab Emirates and GCC. We have mounted a leading position in manufacturing high-quality polyethylene water tank aboveground and underground types, and we provided high-quality plastic road barriers on the streets of the United Arab Emirates. Therefore we become a prime manufacturer in the region that continuously provided pioneered products with exceptional services at fair market rates.

Among all the other tank manufacturers, Stars Poly Storage Tanks Factory is the only company in this field that provides one quality for all our products.

Stars Poly Storage Tanks Factory owns the latest machine which enables us to run several production lines which makes Stars Poly the only company in the industry that has a different of products in shapes & colours with high quality.

### OUR VALUES

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The company upholds the following values as a guideline to its operation and business transactions:

- **Commitment**
- **Customer Value**
- **Teamwork**
- **Professionalism**
- **Flexibility / Adaptability**

# COMPANY PROFILE

## GENERAL INFORMATION

Primary contacts for sales / client services	Tel: +971 4 347 62 00 Fax: +971 4 347 62 32 Email: inquire@starspoly.com
Address	P.O. Box 37552, Dubai, United Arab Emirates
Type of Organization	Limited Company
Type of Business	Manufacturing of plastic building products.
Year Established	1998
Year Incorporated	1998
Summary of main business activities	<ul style="list-style-type: none"> <li>• Manufacturing of Polyethylene Water Tanks Vertical &amp; Horizontal</li> <li>• Manufacturing of Polyethylene Underground Water Tanks</li> <li>• Manufacturing of Road Barriers</li> <li>• Manufacturing of Pedal Boats</li> <li>• Manufacturing of Study Seat</li> <li>• Manufacturing of GRP Fiberglass water &amp; septic tanks</li> <li>• Suppling &amp; installation of Steel water Tanks</li> <li>• Suppling &amp; installation of GRP Hot Press Panel Water Tanks</li> </ul>

## OVERVIEW

Established in Dubai in 1998.

## MISSION STATEMENT

To offer and supply a wide range of high-quality products life which lead to everyone's trust and satisfaction.

## VISION

To rapidly expand and make our products & services available, accessible, and reachable to everyone at any point of the GCC.

## OBJECTIVE

Our objectives are to assist clients & contracting companies with various implementations of their projects, and we have confidence in our ability to generate the consensus and commitments necessary to succeed. We are prepared to stand behind our recommendations and to assist our clients with the highest quality products.

# COMPANY STRUCTURE





# PLASTIC WATER STORAGE TANKS

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FOR SAFE & PURE WATER STORAGE SOLUTIONS

## SPECIFICATION & FEATURES

**STARS POLY PLASTIC WATER TANKS** are made locally in the UAE with rotomolding technology. Our tanks are NSF and WRAS certified and are designed to keep away harmful substances through multiple protective layers. The tanks are available in different types and capacities, such as Vertical Tanks, Horizontal Tanks, Underground Tanks etc.





# RAW MATERIALS

## 3 Layers



### 1st Layer - White Color

UV stabilized polyethylene with food grade white master batch.

### 2nd Layer - Polyethylene Black Color

This layer provides the following values:

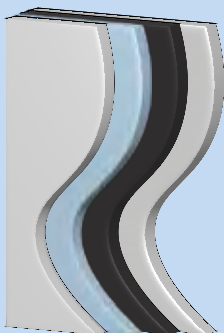
- Prevent formation of fungus
- Prevent the bacterial growth

In addition to UV stabilizer added to the raw material, the black color is naturally acts as an additional UV stabilizer and naturally food grade color.

### 3rd Layer - Polyethylene White Color

Works the same as the first layer to be suitable for the storage of Potable water.

## 4 Layers



### 1st Layer - White Color

UV stabilized polyethylene with food grade white master batch.

### 2nd Layer - Black Color

This layer provides the following values:

- Prevent formation of fungus
- Prevent the bacterial growth

In addition to UV stabilizer added to the raw material, the black color is naturally acts as additional UV Stabilizer and naturally food grade color.

### 3rd Layer - Polyethylene Foam Clear Color

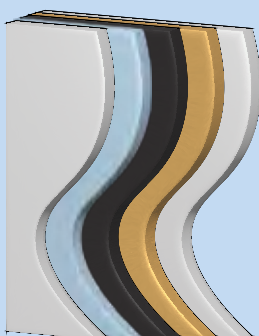
This layer provides the tank the following values:

- Thermal Insulation
- Improving Stiffness

### 4th Layer - Polyethylene White Color

Works the same as the first layer to be suitable for the storage of Potable water.

## 5 Layers



### 1st Layer - White Color

UV stabilized polyethylene with food grade white master batch.

### 2nd Layer - Polyethylene Yellow Color

UV stabilized.

### 3rd Layer - Black Color

This layer provides the tank the following values:

- Prevents formation of fungus
- Prevents bacterial growth

In addition to UV stabilizer added to the raw material, the black color is naturally acts as an additional UV Stabilizer and naturally food grade color.

### 4th Layer - Polyethylene White Color

This layer provides the tank the following values:

- Thermal insulation
- Improving stiffness

### 5th Layer - Polyethylene White Color

Works the same as the first layer to be suitable for the storage of Potable water.

# RAW MATERIALS

## MATERIAL

- **Polyethylene** : Polyethylene as a main raw material for the production of storage water tanks came as an alternative to solve the problems of using the existing fiberglass tanks to give more life, more protection, and at the same time using recyclable material.

Polyethylene is a high-quality thermoplastic that has outstanding resistance to both physical and chemical attacks. The overall general toughness and excellent chemical resistance to a wide array of wet and dry industrial chemicals and food products make polyethylene ideally suited for storage tanks and containers.

Polyethylene is translucent and its natural colour range is slightly off white to creamy yellow depending on the wall thickness and type. Ultraviolet light stabilizers are added for use in outdoor applications.

- **Ultraviolet Stabilisers** : Stars Poly Storage Tanks Factory uses the LLDPE, which includes UV Stabilisers, which greatly reduce the harmful effect of UV light. And for that reason, a black layer is added to the product to ensure more protection from UV light.

## PLASTIC TANKS RANGE

Stars Poly Storage Tanks Factory produces a wide range of polyethylene tanks that range from **50 to 6,000 US gallons** in vertical shape, **100 to 2,000 US gallons** in horizontal shape and Under-ground Water Tanks in different sizes.

## COMPARISON BETWEEN TANKS

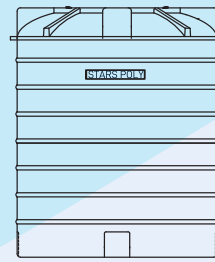
Properties	R.C.C.	Iron	F.R.P.	Plastic
Corrosion	No	Yes	No	No
Fungus Formations	Yes	Yes	Yes	No
Heat Resistance	Poor	Very Poor	Good	Good
Portability	No	No	No	Yes
Weight	Very Heavy	Heavy	Light	Very Light
Maintenance Cost	High	Very High	Low	Low
Scrap Value	Zero	Low	Low	High
Average Life	High	Low	Low	Low
Risk Of Accidental Contamination	High	High	High	Low
Installation Time	Very High	High	High	Low
Cracks / Leakages	Yes	Yes	Yes	Yes
Manufacturing	Automatic	Labour	Labour	Labour

### In addition to the above advantages:

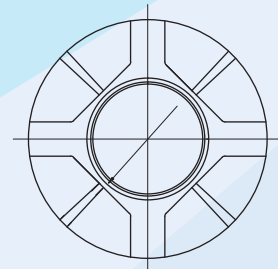
- Plastic tanks have a good surface finish, and smooth inside.
- Easy to clean.
- Moulded in one piece (no joints).



## VERTICAL WATER TANKS



Front View

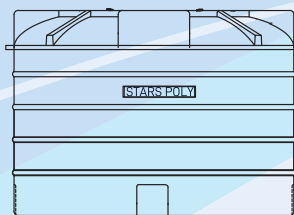


Top View

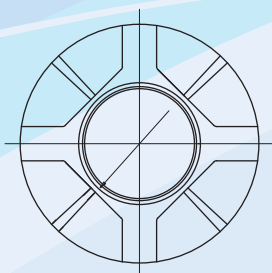
### Dimensions & Specifications

No.	Code	Capacity (US Gallon)	Capacity (liter)	IMP	Diameter (cm)	Height (cm)
1	SV 05	50	189	42	70	62
2	SV 10	100	379	83	79	92
3	SV 15	150	568	125	92	93
4	SV 20	200	757	167	99	112
5	SV 25	250	946	208	103	130
6	SV 30	300	1136	250	104	146
7	SV 40	400	1514	333	124	136
8	SV 50	500	1893	416	135	145
9	SV 60	600	2271	500	143	170
10	SV 80	800	3028	666	154	185
11	SV 100	1000	3785	833	167	187
12	SV 120	1200	4542	999	180	210
13	SV 150	1500	5678	1249	200	232
14	SV 200	2000	7571	1665	206	250
15	SV 250	2500	9464	2082	211	263
16	SV 300	3000	11356	2498	239	282
17	SV 400	4000	15142	3331	274	312
18	SV 450	4500	17034	3747	293	247
19	SV 500	5000	18927	4163	286	328
20	SV 600	6000	22712	4996	300	320

## SHORT PROFILE WATER TANKS



Front View



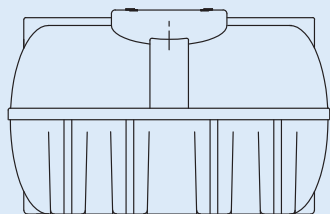
Top View



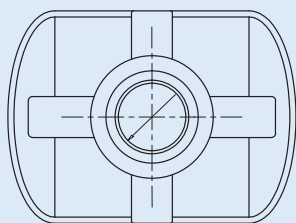
### Dimensions & Specifications

No.	Code	Capacity (US Gallon)	Capacity (liter)	IMP	Diameter (cm)	Height (cm)
1	SV 60-SH	600	2271	500	167	130
2	SV 80-SH	800	3028	666	218	107
3	SV 100-SH	1000	3785	833	213	126
4	SV 125-SH	1250	4732	1041	214	150
5	SV 150-SH	1500	5678	1249	215	170
6	SV 200-SH	2000	7571	1665	240	200
7	SV 300-SH	3000	11356	2498	250	250

## HORIZONTAL WATER TANKS



Front View



Top View



### Dimensions & Specifications

No.	Code	Capacity (US Gallon)	Capacity (liter)	IMP	Diameter (cm)	Height (cm)	Length (cm)
1	SH 10	100	379	83	77	78	109
2	SH 15	150	568	125	77	78	118
3	SH 20	200	757	167	86	88	137
4	SH 25	250	946	208	92	93	144
5	SH 30	300	1136	250	100	103	156
6	SH 40	400	1514	333	112	109	170
7	SH 50	500	1893	416	127	134	167
8	SH 60	600	2271	500	135	136	192
9	SH 80	800	3028	666	144	148	198
10	SH 100	1000	3785	833	156	160	227
11	SH 125	1250	4732	1041	161	162	230
12	SH 150	1500	5678	1249	174.5	168	263
13	SH 200	2000	7571	1665	187.5	194	283

# UNDERGROUND WATER TANKS

## SPECIAL FEATURES

- Corrosion Proof
- Fungus & Bacterial Proof
- Manufactured From Food Grade Approved Materials
- Dubai Municipality Approved
- Low Maintenance
- Long Life
- No Risk Of Contamination
- Easy to Clean and Maintenance free
- Moulded One Piece (No Joints) including 50 cm vertical neck
- Very Strong Body
- Can Carry A Liner Load of 3,500 Kg/m when it is empty
- Can Carry A Total Load of 7,500 Kg when it is empty
- Can be installed under the car parking area and it can carry the load of Two Car + Soil Load on top Even when it is empty (Without Any Supporting Chamber & Concrete Foundation)
- Tested In Virtual Engineering Center Queens University Of Belfast
- Warranted For 10 Years
- NSF Certificate
- WRAS Certificate
- Threaded Sealed Lid Cover



Measurements & Specifications

Model	Capacity (US Gallon)	Capacity (liter)	IMP	Length (cm)	Diameter (cm)	Height (cm)		
						Height	Neck Height	Total
SPHU 36	365	1382	304	180	116	50	166	
SPHU 50	500	1893	416	180	130	50	180	
SPHU 60	600	2271	500	220	132	50	182	
SPHU 70	700	2650	583	235	142	50	192	
SPHU 80	800	3028	666	235	148	50	198	
SPHU 100	1000	3785	833	238	170	50	220	
SPHU 120	1200	4542	999	255	175	35	210	
SPHU 150	1500	5678	1249	285	180	50	230	
SPHU 180	1800	6822	1494	310	180	50	230	
SPHU 200	2000	7571	1665	310	190	50	240	

## Production of the tanks consist of:

### • First Layer / Outer Layer

(Black Color Solid Skin)

UV stabilized polyethylene with food grade black color that acts as an additional UV stabilizer.

### • Second Layer / Middle Layer

(Polyethylene Foam Clear color)

This layer provides the tank the following values:

- Thermal insulation
- Improving Stiffness

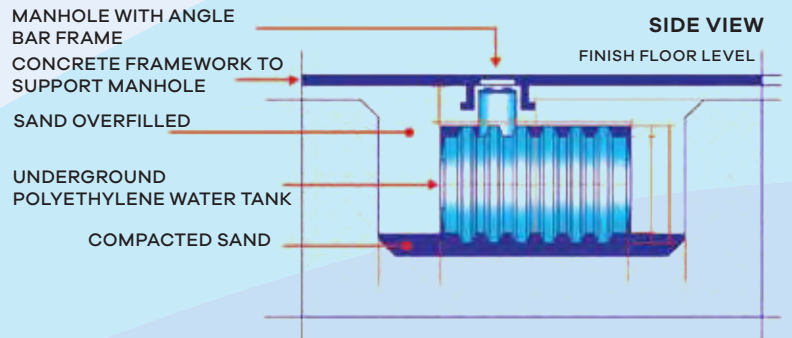
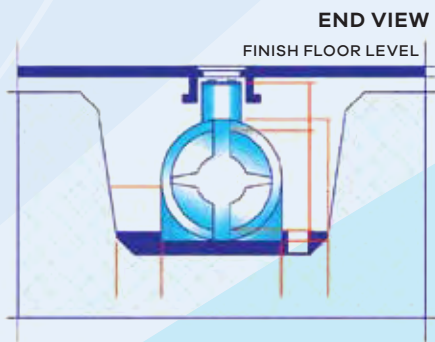
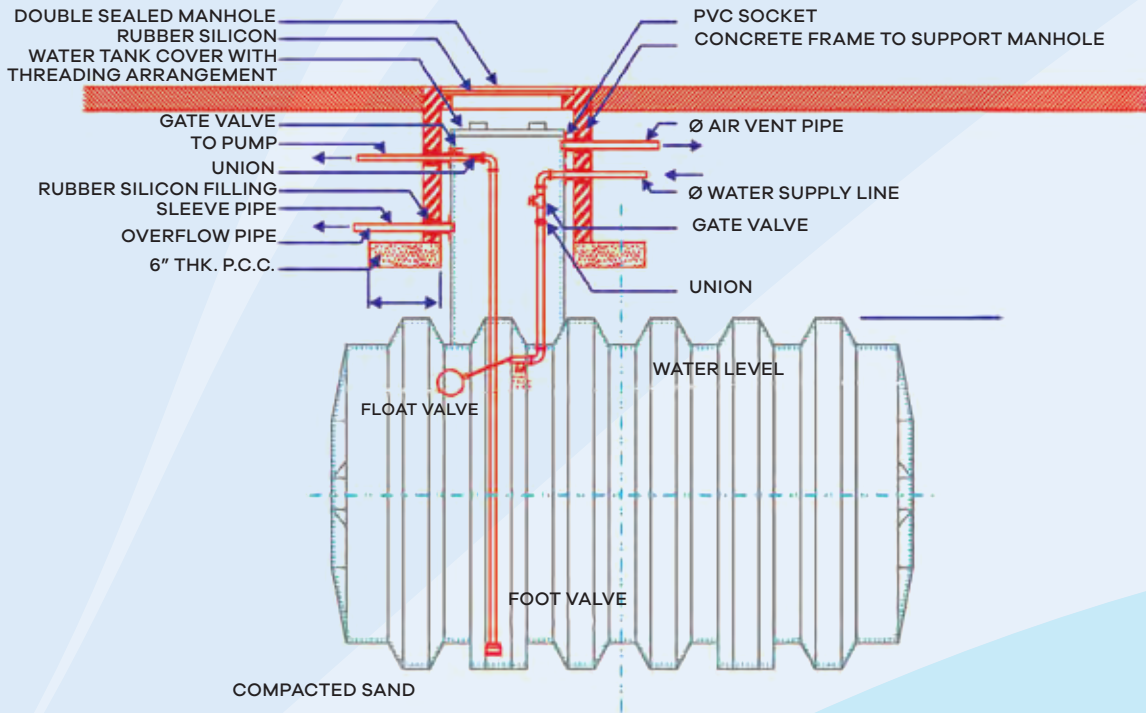
### • Third Layer / Inner Layer

(Polyethylene white color solid skin)

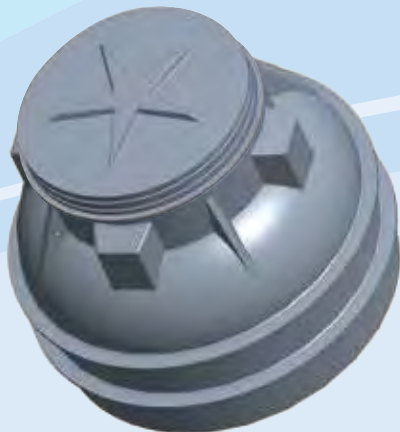
Works same as first layer and provides anti-bacterial growth and to keep the tank visible from inside.



# PLAN



## UNDERGROUND PUMP CHAMBER

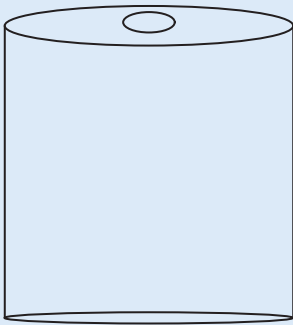
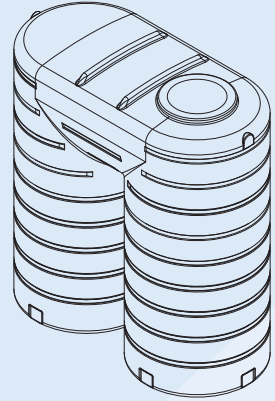


Height (cm)	Diameter (cm)	Inner Manhole Diameter (cm)	Outer Manhole Diameter (cm)
100	115	65	75

# CUSTOMIZED WATER TANKS

## SLIM LINE WATER TANK

Capacity (liter)	Height (cm)	Length (cm)	Width (cm)	Diameter (cm)
4000	216	207	100	100
5000	217	268	131	300

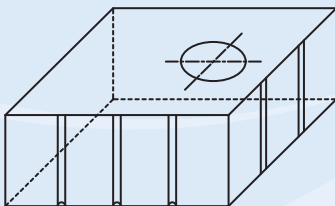
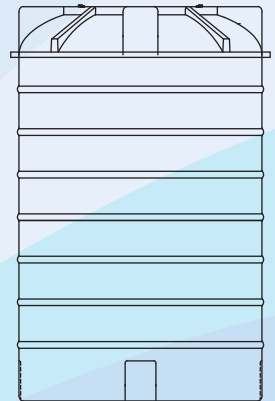


## OVAL SHAPE WATER TANK

Capacity (liter)	Height (cm)	Length (cm)	Depth (cm)
2100	175	207	80

## VERTICAL SLIM TANK

Code	Capacity (US Gallon)	Diameter (cm)	Height (cm)
SV 50 - LN	500	114	198



## RECTANGULAR PLASTIC TANK

Height (cm)	Length (cm)	Depth (cm)
175	207	80



# ROAD BARRIERS

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FOR EASY & SECURE TRAFFIC SOLUTIONS





## ROAD BARRIER FEATURES



## COMMON APPLICATIONS

- Public Works Project
- Lane Delineation
- Building Construction Zones
- Sports or Special Events
- Vehicle/Pedestrian Separation
- Parkade/Parking Lots
- Crowd Control
- Temporary Electronic Message Boards
- Temporary Road Closures or Rerouting
- Airports, Air Side
- Blacktop Resurfacing
- Ferry Terminals

# INTERLOCKING SYSTEM

MALE - FEMALE PIN SYSTEM



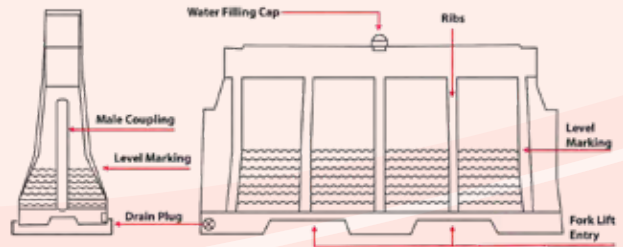
ROAD BARRIERS



## SPR 201 – Self Joint



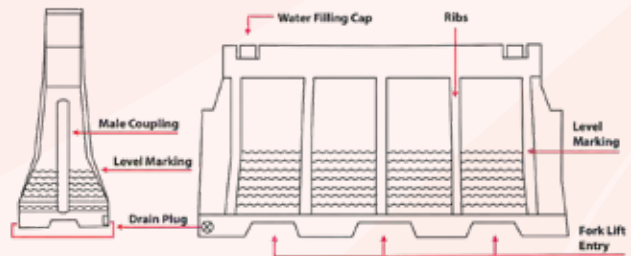
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
100	200	20	52



## SPR 203 – Self Joint



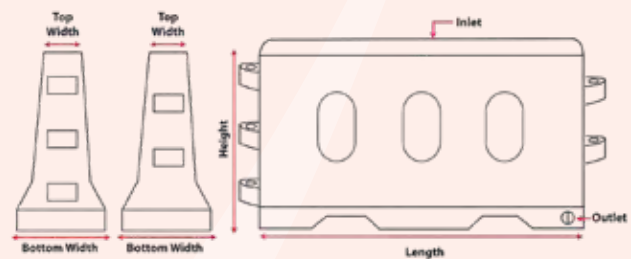
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
85	200	20	52



## SPR 204 – Pipe Lock Joint (Full Water Capacity)



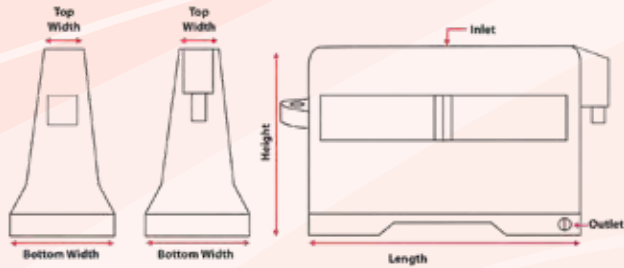
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
95	200	18	60





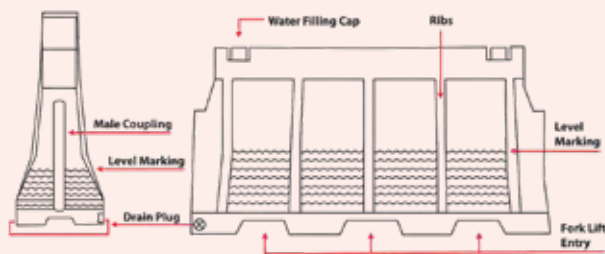
## SPR 206 - Small

Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
60	96	15	35



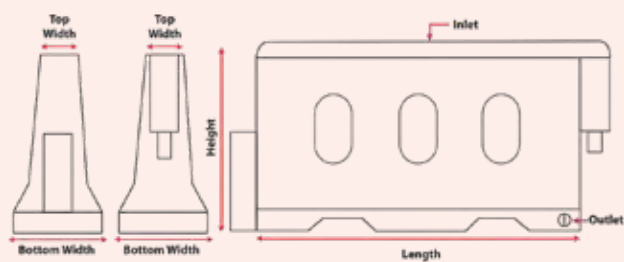
## SPR 207 - Self Joint

Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
105	200	17	52



## SPR 208 - Self Joint (Full Water Capacity)

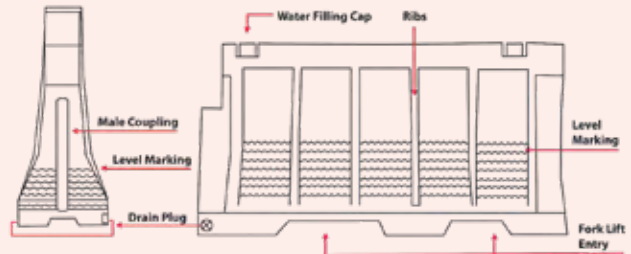
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
85	184	15	50



## SPR 209 - Self Joint



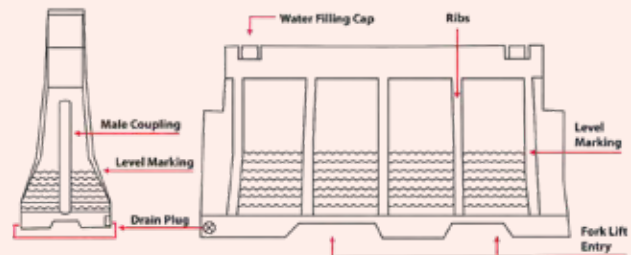
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
80	200	15	40



## SPR 210 - Self Joint



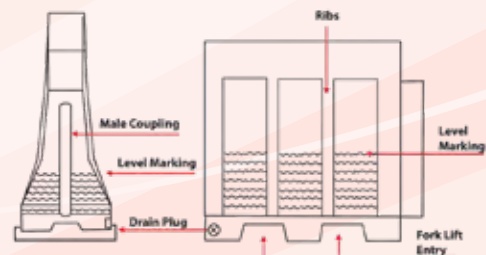
Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
82	200	15	47



## SPR 211 - Self Joint

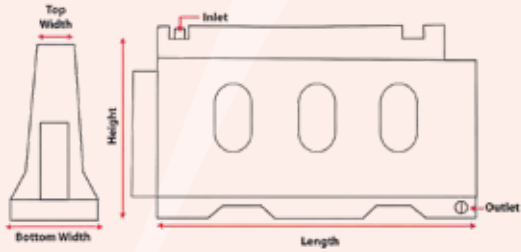


Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
100	100	17	50



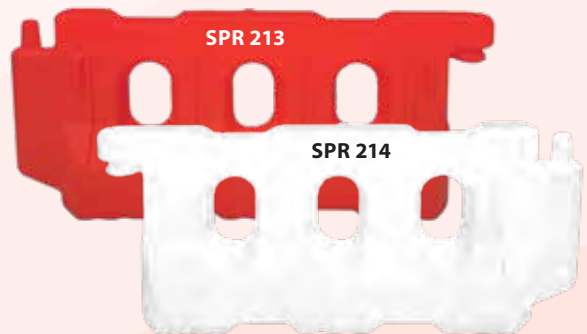
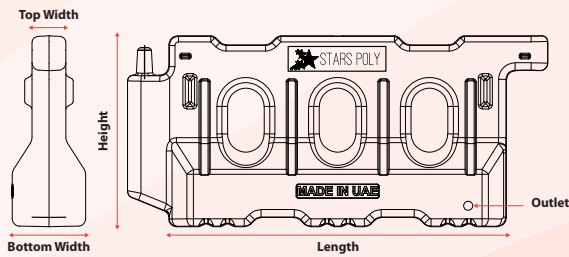
## SPR 212 - Self Joint

Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
80	200	17	40



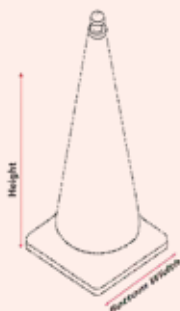
## SPR 213 / 214 - Self Joint

Model	Height (cm)	Length (cm)	Top Width (cm)	Bottom Width (cm)
SPR 213	82	229	18	40
SPR 214	104	229	18	40



## TRAFFIC CONES

Height (cm)	Weight (kg)	Bottom Width (cm)
100	5	50





# GRP FIBERGLASS WATER & SEPTIC TANKS

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FOR VERSATILE & RELIABLE WATER STORAGE SOLUTIONS

# INTRODUCTION

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GRP is perhaps the most versatile construction material known today, it can offer the designer a wide scope for complexity of shape and can prove very effective when designed correctly, during the design process we can utilize many inherent material characteristics that GRP has to offer, such as dimensional stability, strength, lightness of weight and choice of color, so there is almost no limit to the complexity of shape, surface appearance and scale of work achievable in GRP. **IN GRP THE ONLY LIMIT IS YOUR IMAGINATION.**

We undertake small to large volume production, but we are also mindful that sometimes a single product or prototype is all that is required. Due to our continual commitment to cost effective composite solutions and our open minded approach regarding unusual or specialist applications, we will consider almost any project.

# PRODUCTS & SERVICES

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## GRP (GLASS REINFORCED PLASTIC) PRODUCTS

- Horizontal Water Tanks
- Vertical Water Tanks
- Horizontal Septic Tanks
- Soak-away Tank
- Portable GRP Toilet
- Customized Water Tanks





# CYLINDRICAL GRP WATER & SEPTIC TANKS

STARS POLY STORAGE FACTORY is a leading manufacturer of horizontal & vertical cylindrical tanks. Tanks are available in various capacities to meet the requirement of our valued customers. These tanks are mainly used for storage of drinking water and as septic tanks. Stars Poly produce fiberglass water tanks that are ideal for the harsh weather in the gulf region. We have special division for the fiberglass water tanks in our factory to ensure high quality products, we are supplying GRP tanks all over the U.A.E & exporting to other GCC countries.

## SPECIAL FEATURES

- Smooth internal & external surface
- Black UV layer in the middle prevents bacteria growth inside the tank
- Thickness according to the tank size or customer's requirement, external ribs provided for better strength
- Inlet, Outlet, Drain & Overflow connections for easy installation
- We use good quality Isophthalic Resin for water tank & Vinylster resin for septic tanks



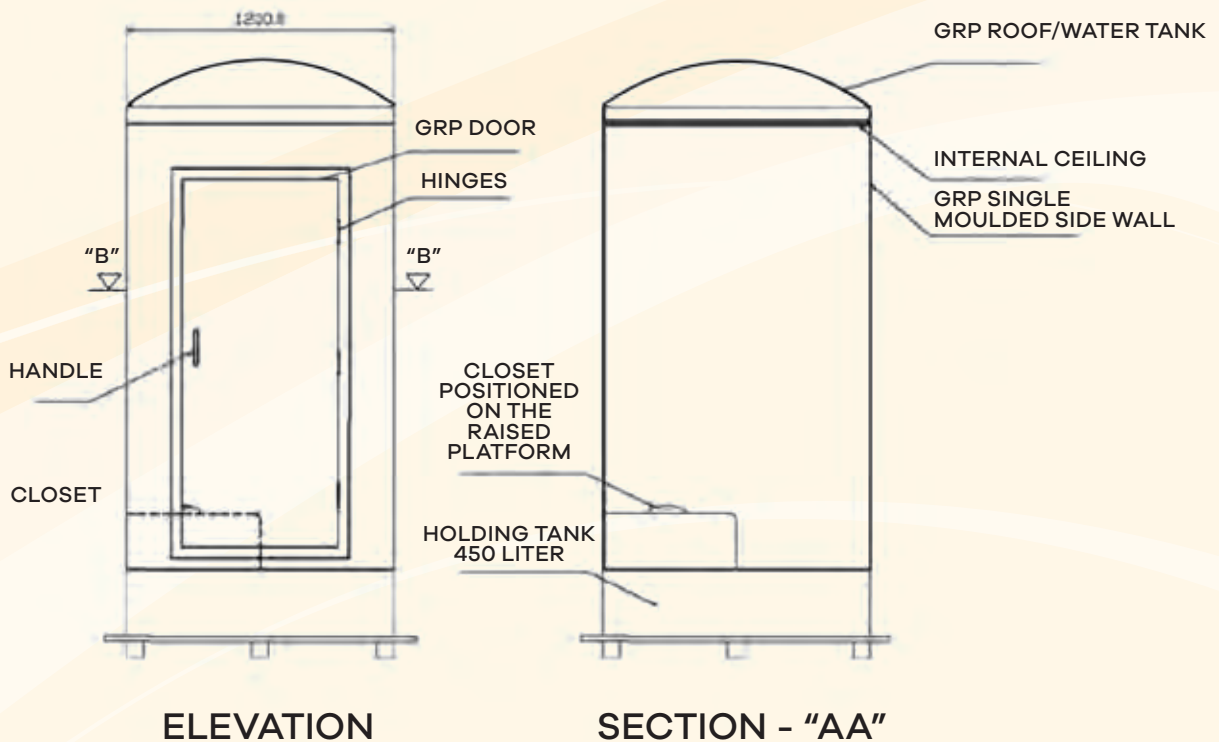
GRP FIBERGLASS TANKS

No.	Capacity (US Gallon)	Capacity (liter)	IMP	Width (mm)	Height (mm)	Length (mm)
1	500	1893	416	1200	1275	1600
2	800	3028	666	1301	1225	2220
3	1,000	3785	833	1470	1560	2230
4	1,500	5678	1249	1650	1650	2700
5	2,000	7571	1665	2150	2150	2550
6	2,500	9464	2082	2150	2150	2700
7	3,000	11,356	2498	2150	2150	2550
8	4,000	15,142	3331	2150	2150	4350
9	5,000	18,927	4163	2150	2150	5550
10	6,000	22,712	4996	2150	2150	6500
11	7,000	26,498	5829	2150	2150	7440
12	8,000	30,283	6661	2850	2600	5340
13	9,000	34,069	7494	2850	2600	6200
14	10,000	37,854	8327	2850	2600	7200
15	12,000	45,425	9992	2850	2600	7210
16	15,000	56,781	12,490	2850	2600	9200
17	18,000	68,137	14,988	2850	2600	10500
18	20,000	75,708	16,653	2850	2600	12200
19	25,000	94,635	20,817	2850	2600	13500

# GRP PORTABLE TOILET

GRP Portable toilets is one of the traditional / conventional products which is widely used in Construction sites due to its light weight structure and low pricing and ready availability with water & waste tanks. The normal toilets have a dimension of 1.20 x 1.20 x 2.00 meters. The water tank of this portable toilet has a total capacity of 300 liters while the waste holding tank has 500 liters capacity and could be increased a few hundreds more on requirements.

It also has special features to make you comfortable when you are using the portable toilet such as wash basin, soap dish, extra water tap, shataff, tube light, exhaust fan, waterproof switch, GRP step, air vent etc. and an outlet which also allows you to connect with external water supplies and waste outlets. If Electricity, water and waste connection are provided externally, it would be an instant solution for all sites.



## SPECIAL FEATURES

- Size: 1.20 m x 1.20 m x 2.00 m
- W/C - Western type and Asian types
- Water Tank - 300 Ltr capacity, Holding tank-500 Ltr. capacity
- Wash basin, Soap Dish, Extra water tap, Shut-off, Tube light, Exhaust fan, Water proof switch, GRP steps (for bigger waste tanks), Air vent, Outlet waste connections.
- 2 and 3 toilets attached are also available





# GRP HOT PRESS SECTIONAL WATER TANKS

---

FOR SIMPLE & RELIABLE WATER STORAGE SOLUTIONS



## SPECIAL FEATURES

- **Intensity and Durability**

Glass fiber Reinforced Panel is molded under condition of high temperature and pressure to maintain the best endurance. Since using stainless steel for inside structure and HDG steel for outside, it shows best performance against erosion.

- **Excellent Hygiene**

No corrosion from panels and prevent bacteria increasing by isolating outside light.

- **Watertightness**

The joints are sealed with special sealing tape especially developed for water tank.

- **Heat Insulation and Dewdrops Prevention**

The heat insulation panel with 3 layer structured improves heat insulation effect. Protects water from dewdrops and minimizes temperature variation of the stored water.

- **Best Size Stability**

GRP Sectional water tank panels size are changeless from the outside condition so assemble it accurately.

- **Various Capacity Design**

Various sized panels used limited space for its best using way so can satisfy your needs.

- **Easy to Assembly and Transporting**

GRP Sectional panels make construction time shorter, standardization panels make easier to moving, carrying in and transfer.

1

### STANDARDS

BS EN 13280:2001  
British Standard BS 7491 Part 3:1994

2

### MATERIALS

Sheet Molding Compound (SMC) consists of below specification Resin - Isophthalic unsaturated polyester resin conforming to BS 3532 specification Fiber Glass - Low alkali fiberglass conforming to JIS R3411 to R3417 or BS 3396, BS 3496, and BS 3749 specifications.

3

### TESTING METHODS

BS2782

4

### MANUFACTURING PROCESS

Hot pressed SMC compression moulding

5

### TANK STRUCTURAL SUPPORT

External : Hot Dipped Galvanized Steel  
Internal : SS316  
Roof Support : PVC Pipes

6

### SEALANT

Non-toxic PVC

7

### BOLT, NUTS, WASHERS

External Standard : SS316 A4 Grade (Optional SS304)  
Internal Standard : SS316 (In-contact with water)  
Roof Standard : SS316 (Optional SS304)

8

### LADDER

External Standard : Hot Dipped Galvanized Steel, 300mm width  
Internal : Standard GRP  
Optional : SS 304 and 316, 300mm width

9

### NOZZLE PANEL

Flat Panels will be provided on request

10

### WATER LEVEL INDICATOR

Standard : Direct Reading Clear Tube Type  
Optional : Reversed Reading Mechanical Ball Float Type (Cat & Mouse)

11

### EXTERNAL BRACED SYSTEM

External : Hot Dipped Galvanized Steel Internal  
None (metal free inside, non-partitioned tank only)  
Roof Support : GRP Poles

# PANEL PHYSICAL PROPERTIES

Test Item	Unit	Result	Test Method
Specific Gravity (23°C/23°C)	-	1,806	ASTM D792-13(Test Method A)
Water Absorption	%	0.02	ASTM D570-98(2010)e1 (24 h Immersion)
Tensile Strength	MPa	115	ASTM D638-14(*)
Tensile Elastic Modulus	GPa	17.5	ASTM D638-14(*)
Flexural Strength	MPa	213	ASTM D790-17(Procedure A)
Flexural Elastic Modulus	GPa	15.9	ASTM D790-17(Procedure A)
Shear Strength	MPa	114	ASTM D732-17
Izod Impact Strength	J/m	923	ASTM D256-10e1(Test Method A)
Compressive Strength	MPa	234	ASTM D695-15(**)
Thermal Conductivity (Mean Temperature 20°C)	W/(m.k)	0.115	KS L 9016 : 2010 (By means of the Heat Flow Meter Apparatus)
Thermal Conductivity (Mean Temperature 20°C)	W/(m.k)	0.024	KS L 9016 : 2010 (By means of the Heat Flow Meter Apparatus)
Barcol Hardness	-	53	ASTM D2583-13a
Glass content	%	over 42.9%	ASTM D2584-11

# STRESS ANALYSIS OF GRP PANEL

GRP Water Tank panel is designed with special shape for maximizing safety against stress and deformation, so it has better structural strength than normal circle designed panel. As GRP Water panel is manufactured by oil-hydraulic press under high temperature and high pressure, it maintains top water pressure strength and there is no dimensional deviation by temperature change.

GRP SECTIONAL WATER TANKS

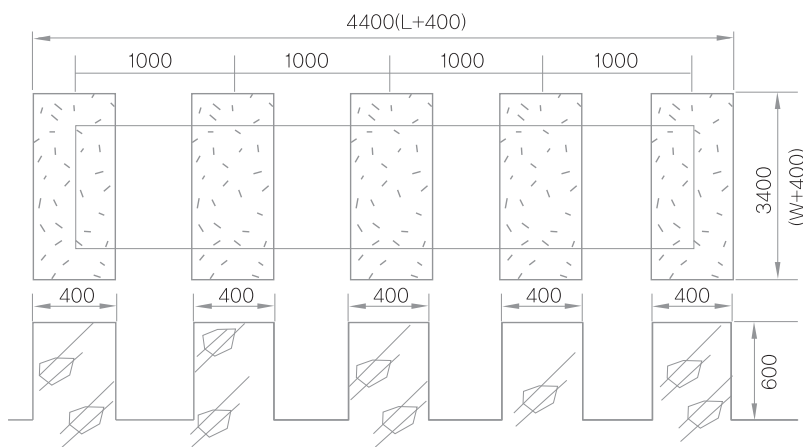




# PREPARING FOR INSTALLATION

## BASE CONCRETE INSTALLATION STANDARD

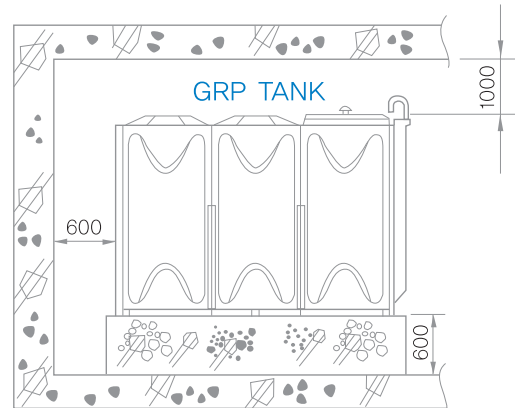
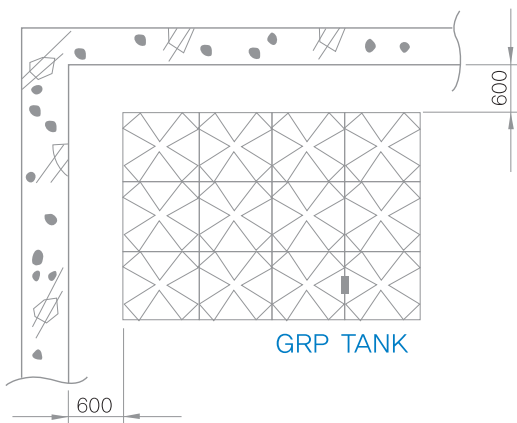
- Width : 300 - 400 mm
- Height : over 600mm (Base frame included)
- Outer Dimension : Width, Length +400mm
- Space : less than 1 m
- Horizontal Degree : less than 1/500 (Surface has to be horizon flat)



ex) 3W×4L×2H

## GRP WATER TANK INSTALLATION SPACE

For maintenance and repairing, it is recommended to leave at least 600mm and 1,000mm extra space from wall and ceiling.



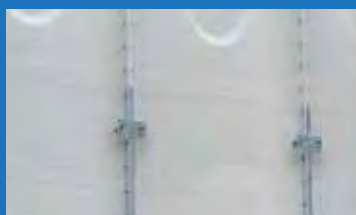
# REINFORCEMENT SYSTEM

## INTERNAL REINFORCEMENT SYSTEM



**Excellent strength, durability, water tightness, and appearance ; safe structure design**

The panels are interconnected with stainless steel tie rods in the GRP water tank to guarantee the strength of water tank.



Internal section and structure



3MH ↑



# REINFORCEMENT SYSTEM

## EXTERNAL REINFORCEMENT SYSTEM



GRP SECTIONAL WATER TANKS

### Highly durable and sanitary ; easy maintenance

The joint of the side panel is supported with an external reinforcement frame, the upper part, fixed with angles and roundbar stays, and the lower part, connected and fixed with brackets using bolts(the height of the tank is 3m or less)



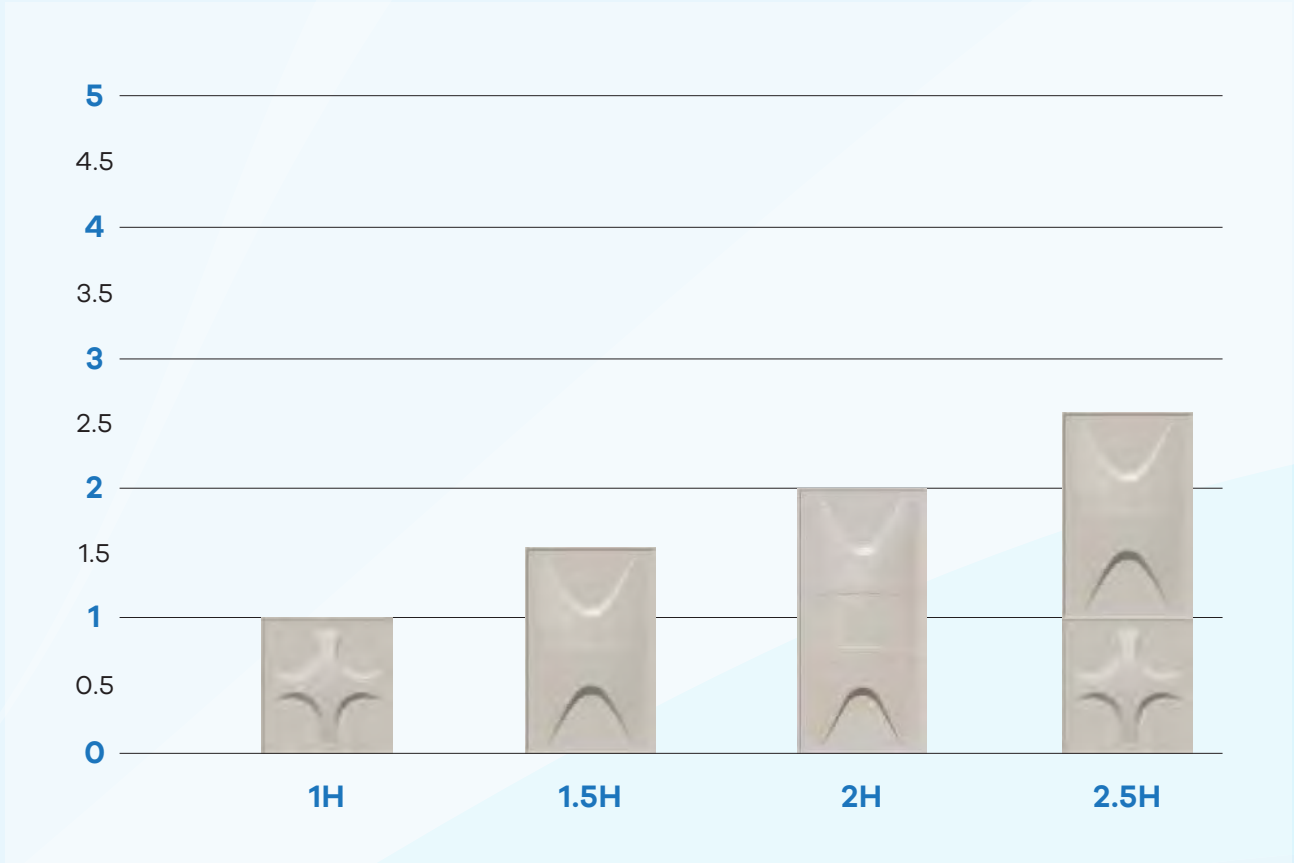
External section and structure



3MH ↓

# PANEL COMPOSITION

## WALL PANEL COMPOSITION BY HEIGHT



GRP SECTIONAL WATER TANKS

## TYPE & SHAPE



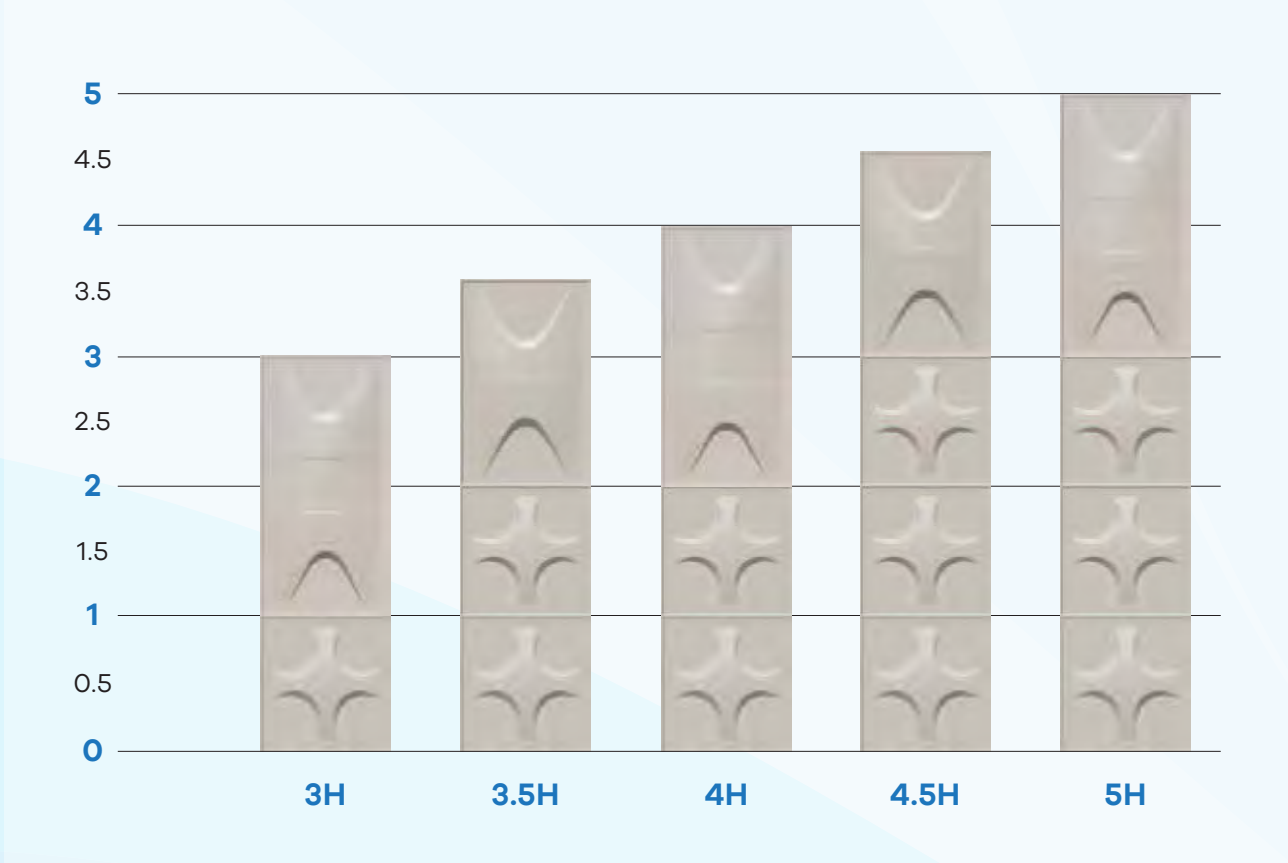
Wall Panel



Bottom Panel

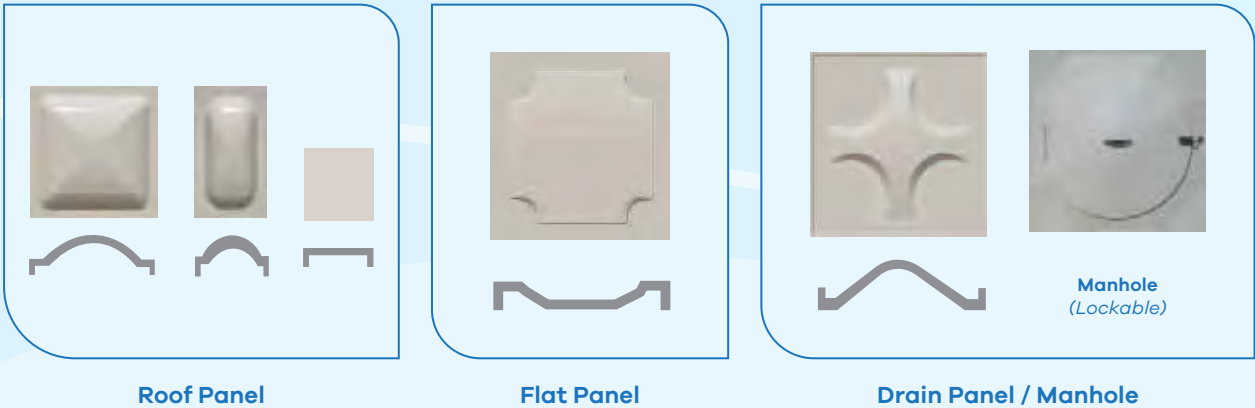
# PANEL COMPOSITION

## WALL PANEL COMPOSITION BY HEIGHT



GRP SECTIONAL WATER TANKS

## TYPE & SHAPE



# IDEAL FOR CLEAN POTABLE WATER

- **Perfect Strength And Durability**

The glass fiber reinforced panels are molded at temperatures up to 150°C using isophthalic unsaturated polyester resins and are pressed under hot press moulding process to realize optimum condition for maintain the best endurance.

- **Panel Design**

Our GRP water tank panels are designed using computer aided design technology and suitable for ambient temperature of 50°C (drybulb) and humid condition of up to 31°C saturated. Also our GRP water tanks are suitable for water temperature up to 50°C.

- **Hygiene**

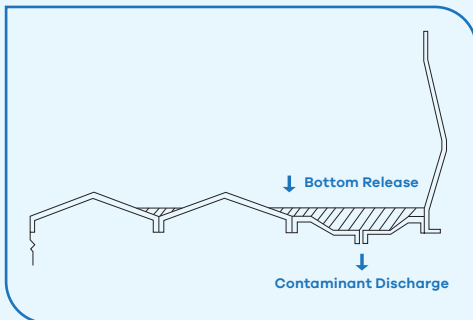
Using non-toxic materials and stainless steel. So it is suitable for used in contact with potable water.

- **Sizes Adaptable To Any Needs**

From small tanks to large, our GRP water tank panels can fit any dimensions. Tank dimensions can be select by customers as they want.

- **Complete Drainage**

The dome shaped bottom panel with a concave drain panel facilitated complete and fast drainage. The concave drain panel has been designed to ensure the periodic cleaning and inspection of the tank.



GRP Water Tank Floor

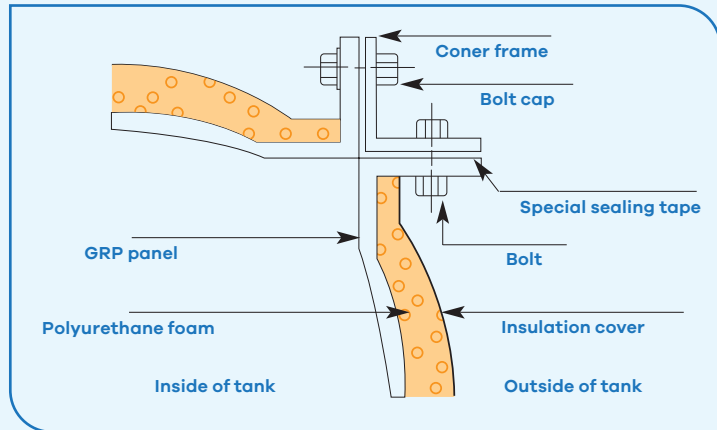


Detailed Flow Diagram



- **Watertightness**

The joints are sealed with special sealing tape specially developed for water tanks.

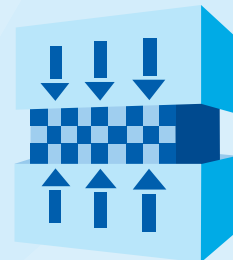


Special sealing tape is approved by water quality PSB Certification.



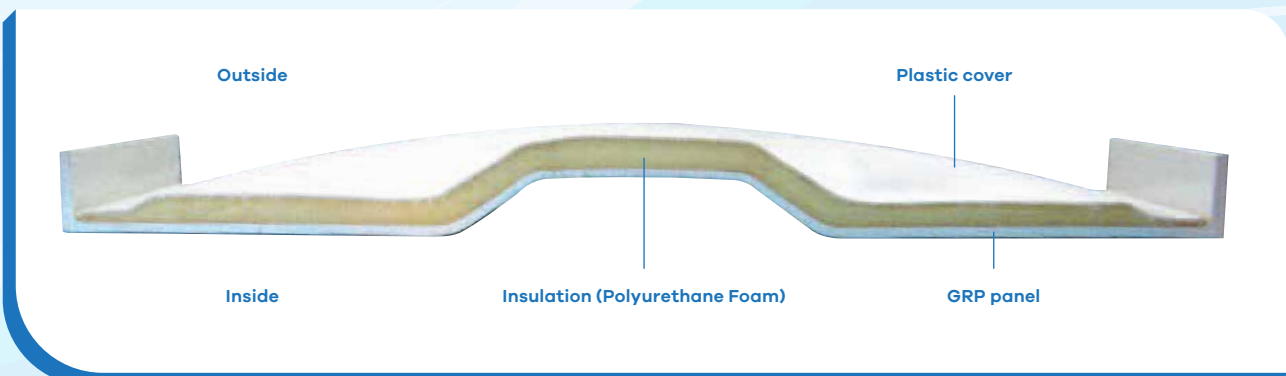
G21489 / SGP  
PSB Singapore  
Sealing Tape Test Report

Compress the sealing tape from top and bottom, original thickness should be 95% restored after 24 hours



- **Insulation And Dew-proofing**

Insulation panel with its three-layer structure improves the insulation effect. Maximizes dew-proofing, and minimizes temperature variation of the stored water.





# ZINCALUM STEEL WATER STORAGE TANKS

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FOR TOUGH & EXTENSIVE WATER STORAGE SOLUTIONS



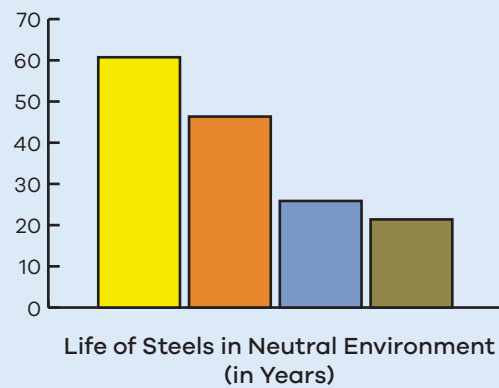
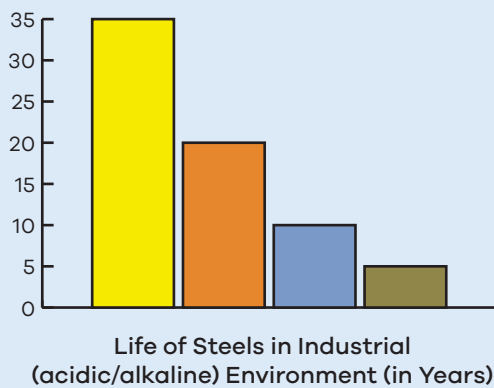
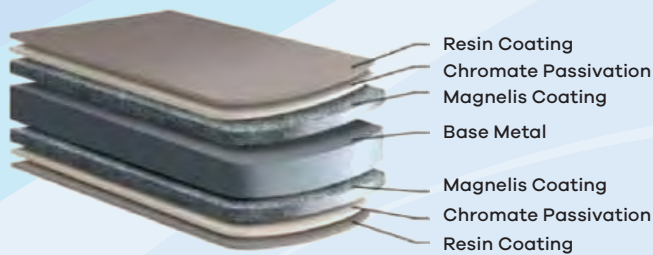


## ZINCALUM STEEL SPECIFICATION

'Ultra High Tensile Low Alloy Steel' offers exceptionally high yield strength, very fine molecular structure of steel and controlled internal purity. It combines outstanding mechanical properties like extremely high strength, fatigue resistance and toughness with good formability and weldability. In some applications abrasion/ wear can result from the action of abrasive substances on the steel surface and also because of the action of load, impact etc. This type of steel is capable of resisting abrasion/ wear & tear. Due to low Carbon equivalent value ( $C < 0.42\%$ ) this type of steel doesn't require pre or post heating for welding. Moreover, it is insensitive to cold cracking and suitable for all types of arc welding.

# ANTI CORROSION SURFACE TREATMENT

Magnelis / ZAM / Zinc Alume or 600 gm/ sq. meter Hot Dip galvanizations are available as options for corrosion resistance surface treatment although we use 'Magnelis' as primary option because Magnelis offers far more superior protection than any other in industrial area with chloride, ammonia or high alkaline (pH between 10 and 13) environments. Due to its chemical composition, it provides better 'barrier protection'. It also protects exposed steels or cuts on coatings with a thin zinc based protective film with Magnesium because of its adherent metallic layers.





# LINER/TANK MEMBRANE

The Liners are made by PVC, reinforced with compressed multilayer nylon mesh with options like Butyl Rubber or EPDM. Liners are pre-fabricated as one piece 'bag' to fit inside the water tank. These are non-sticky and chemically stabilized. With water inflow, it takes the shape of the tank. These liners are made of food grade, anti-algae material and are UV stabilized. These are also made according to anti-cracking technology and tested up to 600,000 folds before any cracking.

## Technical details of the Liner:

- Hardness (Test Method BS903A26) : 65 + 5 IRH
- Modulus at 300% Elongation (Test Method BS903A2) : Min. 5.0 Mpa
- Tensile Strength (Test Method BS903A2) : Min. 9.0 Mpa
- Elongation at Break : Min. 400%
- Tear Strength (Test Method BS903A3C) : Min. 30 kn/m
- Adhesion (Test Method DIN-53337) : 12da/N
- Finishing : Glossy Lacquered (both face)



# ACCESSORIES



**NOZZLE**



**SPIRAL LADDER**



**LADDER & SAFETY CAGE**



**GOOSE ROOF VENT**



**ROOF VENT**



**HOLD DOWN BRACKET**



**TURBINE VENT**



**NUTS & BOLTS**



**ROOF STRUCTURE**



**STIFFENER**

# APPLICATIONS

- Drinking water storage
- Industrial Water Storage
- Raw Water Storage
- Industrial Waste Water Storage
- Municipal Waste Water Storage
- Leachate Waste Water Storage
- Anaerobic Water Storage
- Chlorination Water Storage
- Sludge Holding Tank
- DM Water Storage
- Equalization Water Storage
- Fire Fighting Water Storage
- Rain Water Storage
- Agricultural Water Storage
- Underground or Basement Water Storage
- Fish Cultivation Water Storage
- Coal Wash Tanks



# ADVANTAGES

- MAGNELIS / ZAM / Zinc Alume or 600gm/ sq.meter Galvanized Steel as options for ultimate corrosion protection even at coastal area or at any harsh and aggressive environment.
- Ultra High Tensile Strength Low Alloy Steel with exceptionally high yield strength and outstanding mechanical properties like good formability, weldability, exceptional / wear & tear resistance for heavy duty industrial applications.
- Water Tanks can be designed for 250 km/Hr wind speed and highest seismic zone consideration.
- JS 1000 Coated or 300 Series Stainless Steel Fasteners and Nozzles for highest corrosion resistance, high lubricity and less stress, Non Toxic and FDA approved for use around food products.
- Chemically compatible, food grade,UV stabilized liner made of PVC compressed with multi-layer nylon mesh and Liner-anti-crack technology, tested for crack prevention up to 600,000 folds.
- Extremely heavy duty and complete hot dipped galvanized roof structure with 'I' or 'Z' beam roof rafters, multiple Compression beams, curved spreaders and tensioned rings. Roof peak load can be achieved up to 22,000 kg.
- Ultra High Tensile steel makes the tanks extremely light weight which transfer low load to the platform and make it suitable for overhead installations with minimum foundation requirement and fast installation tank.
- Extremely High base steel hardness.
- Extremely low solar heat absorption.
- Up to 3 Stiffeners per wall sheet with 'W' profile or 'Round Column' profile.



# STORAGE TANK CAPACITY CHART

Gross Capacity Chart (in Kilo liters)

Model Nos.		SP 001	SP 002	SP 003	SP 004	SP 005	SP 006	SP 007	SP 008	SP 009	SP 010
Diameter		2.39	3.18	3.98	4.77	5.57	6.37	7.16	7.96	8.75	9.55
No. of Rings	Tank Height										
H-1	1.12	5.02	8.89	13.93	20.01	27.29	35.69	45.09	55.73	67.34	80.21
H-2	2.09	9.37	16.60	26.00	37.34	50.92	66.59	84.14	103.99	125.65	149.68
H-3	3.06	13.37	24.30	38.06	54.67	74.55	97.50	123.18	152.25	183.97	219.15
H-4	4.03	18.08	32.00	50.13	72.00	98.18	128.41	162.23	200.51	242.29	288.62
H-5	5.00	22.43	39.70	62.19	89.33	121.81	159.32	201.28	248.77	300.60	358.08
H-6	5.97	26.78	47.41	74.26	106.66	145.44	190.22	240.33	297.04	358.92	427.55
H-7	6.94	31.13	55.11	86.32	124.00	169.07	221.13	279.38	345.30	417.24	497.02
H-8	7.91	35.48	62.81	98.39	141.33	192.71	252.04	318.43	393.56	475.55	566.49
H-9	8.88	39.83	70.51	110.46	158.66	216.34	282.94	357.48	441.82	533.87	635.96
H-10	9.85	44.18	78.22	122.52	175.99	239.97	313.85	396.52	490.08	592.19	705.43
H-11	10.82	48.53	85.92	134.59	193.22	263.60	344.76	435.57	538.35	650.51	774.89

Model Nos.		SP 011	SP 012	SP 013	SP 014	SP 015	SP 016	SP 017	SP 018	SP 019	SP 020
Diameter		10.35	11.14	11.94	12.74	13.53	14.33	15.12	15.92	16.72	17.51
No. of Rings	Tank Height										
H-1	1.12	94.21	109.14	125.38	142.75	161.00	180.60	201.06	222.90	245.87	269.65
H-2	2.09	175.81	203.67	233.97	266.37	300.43	337.01	375.20	415.95	458.80	503.18
H-3	3.06	257.40	298.19	342.56	390.00	439.87	493.43	549.33	609.00	671.74	736.72
H-4	4.03	339.00	392.17	451.15	513.63	579.31	649.84	723.46	802.05	884.68	970.25
H-5	5.00	420.59	487.25	559.74	637.26	718.74	806.25	897.60	995.09	1097.62	1203.79
H-6	5.97	502.18	581.77	668.33	760.89	858.18	962.66	1071.73	1188.14	1310.55	1437.32
H-7	6.94	583.78	676.30	776.92	884.52	997.62	1119.08	1245.87	1381.19	1523.49	1670.86
H-8	7.91	665.37	770.82	885.51	1008.15	1137.05	1275.49	1420.00	1574.24	1736.43	1904.39
H-9	8.88	746.97	865.35	994.10	1131.77	1276.49	1431.90	1594.13	1767.29	1949.37	2137.93
H-10	9.85	828.56	959.87	1102.69	1255.40	1415.92	1588.31	1768.27	1960.34	2162.30	2371.46
H-11	10.82	910.16	1054.40	1211.28	1379.03	1555.36	1744.73	1942.40	2153.38	2375.24	2605.00

Model Nos.		SP 021	SP 022	SP 023	SP 024	SP 025	SP 026	SP 027	SP 028	SP 029	SP 030
Diameter		18.31	19.10	19.90	20.69	21.49	22.29	23.08	23.88	24.67	25.47
No. of Rings	Tank Height										
H-1	1.12	294.85	320.84	348.28	376.48	406.16	436.96	468.49	501.53	535.26	570.54
H-2	2.09	550.21	598.72	649.92	702.55	757.93	815.41	874.23	935.89	998.83	1064.66
H-3	3.06	805.58	876.59	951.96	1028.61	1109.69	1193.85	1279.97	1370.24	1462.41	1558.76
H-4	4.03	1060.94	1154.46	1253.20	1354.67	1461.46	1572.29	1685.72	1804.60	1925.98	2052.91
H-5	5.00	1316.60	1432.34	1554.83	1680.73	1813.22	1950.73	2091.46	2238.96	2389.55	2547.04
H-6	5.97	1571.66	1710.21	1856.47	2006.80	2164.99	2329.18	2497.20	2673.32	2853.12	3041.17
H-7	6.94	1827.02	1988.08	2158.11	2332.86	2516.75	2707.62	2902.95	3107.68	3316.70	3535.29
H-8	7.91	2082.32	2265.95	2459.75	2658.92	2868.52	3086.06	3308.69	3542.04	3780.27	4029.42
H-9	8.88	2337.75	2543.83	2761.39	2984.98	3220.28	3464.50	3714.43	3976.40	4243.84	4523.54
H-10	9.85	2593.11	2821.70	3063.02	3311.05	3572.05	3842.95	4120.18	4410.75	4707.41	5017.67
H-11	10.82	2848.47	3099.57	3364.66	3637.11	3923.81	4221.39	4525.92	4845.11	5170.99	5511.80

- All the following capacities in KL (Kilo Ltrs).
- Tanks having sizes in shade are subjected to engineering and design.
- Please discuss with us as we may be able to offer additional variants.
- For capacities over 5,511,800 Ltrs, designs are available on request (up to 9,000,000 Ltrs).
- Tailor made dimensions are also available to fit into the area.



## ADDITIONAL PLASTIC PRODUCTS

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DIVERSE SOLUTIONS TO YOUR UNIQUE NEEDS

### INDEX

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- FLOWER POTS
- MODERN FLOWER POTS
- STUDY SEAT
- PEDAL BOAT

# FLOWER POTS

## PRINCE



Model Name				
VSCP30	30	20	24	50
VSCP45	45	30	32	72
VSCP64	64	43	40	86

## HECTOR



Model Name				
VSCH47	47	33	32	45
VSCH59	59	40	40	60
VSCH73	73	56	50	79

## ROMIO



Model Name				
VSCR34	34	25	23	46
VSCR40	40	31	26	55

## CLEOPATRA

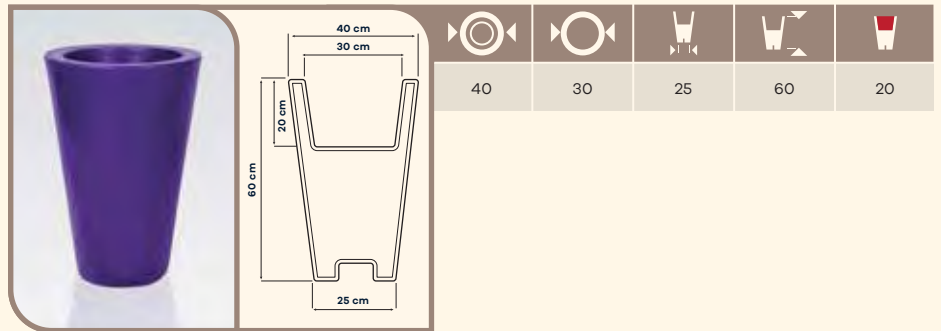


Model Name				
VSC35	35	30	22	28
VSC45	45	40	32	37
VSC57	57	46	37	47
VSC85	85	75	47	60
VSC95	95	80	58	74

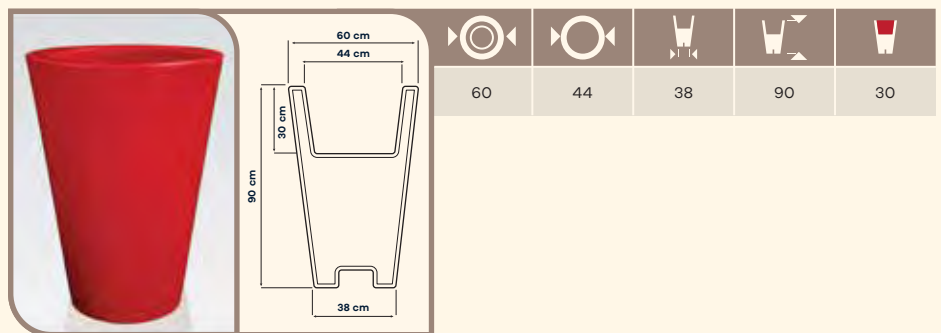


# MODERN FLOWER POTS

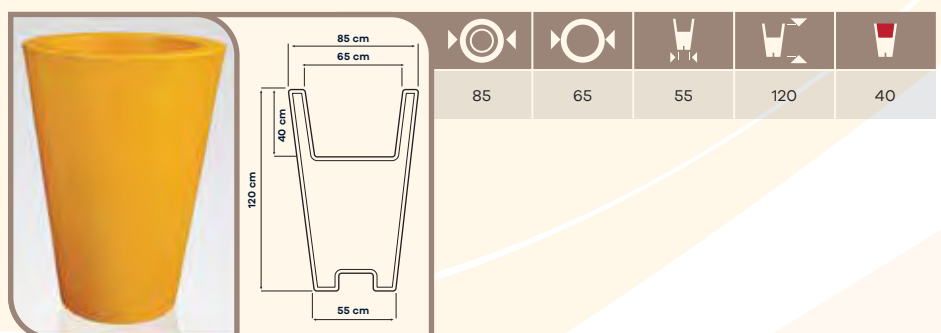
## M 60



## M 90



## M 120



COLORS AS PER REQUEST

# STUDY SEAT



COLORS AS PER REQUEST



## SPECIAL FEATURES

- Made Of Polyethylene Plastic
- Long Life
- 100% Recyclable
- Green Product
- Maintenance Free
- Safe
- Replaces And Saves Trees
- Sustainable Product

Dimensions & Specifications

Model Name	Height (mm)	Length (mm)	Storage Height (mm)	Storage Length (mm)
SS1 (Small)	574	689	147	249
SS2 (Medium)	684	703	193	254
SS3 (Large)	762.50	751.50	193	277



# PEDAL BOAT



A 3.3 meter length boat, suitable for use with pedal system or outboard engine power of maximum 4 hp (3 KW) outboard, polyethylene construction.

## SPECIAL FEATURES

- Allows 2 Passengers To Enjoy Pedal Boating With Great Performance
- Allows Carrying 4 Persons With Peddlers
- Easy To Fix Engine System
- Easy Handling
- Smooth Design
- Designed Operation In Sheltered Areas
- Designed Operation In Elsewhere When Condition Are Fairly With Small Waves
- One Piece Molded Tanks (No Joint)
- Produced In Colors That Suites Your Needs
- Perfect For Family Fun
- Has A 5 Year Warranty For The Hull And 2 Year Warranty For Parts

### Dimensions

<i>Hull Length (m)</i>	<i>Beam Height (m)</i>	<i>Hull Weight (kg)</i>
3.3	1.9	180



# PLASTIC PVC PIPES & FITTINGS

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VERSATILE PLASTIC PRODUCTS

# PRODUCT LIST



























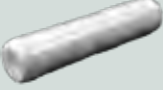



Product			
 <p><b>HP PIPE</b></p>	Size		Colour
	1/2"		White & Grey
	3/4"		White & Grey
	1"		White & Grey
	1 1/2"		White & Grey
	2"		White & Grey
 <p><b>CONDUIT PIPE</b></p>	19 mm		Black & White
	20 mm		Black & White
	25 mm		Black & White
	32 mm		Black & White
	40 mm		Black & White
	50 mm		Black & White
Product	Inch	Colour	Pcs/Cart
 <p><b>PVC ELBOW 90</b></p>	1/2" 90°	White & Grey	150
	3/4" 90°	White & Grey	375
	1" 90°	White & Grey	225
	1 1/4" 90°	White & Grey	25
	1 1/2" 90°	White & Grey	90
	2" 90°	White & Grey	110
 <p><b>PVC ELBOW 45</b></p>	1/2" 45°	White & Grey	75
	3/4" 45°	White & Grey	75
	1" 45°	White & Grey	50
	1 1/4" 45°	White & Grey	30
	1 1/2" 45°	White & Grey	125
	2" 45°	White & Grey	70
 <p><b>PVC TEE</b></p>	1/2"	White & Grey	100
	3/4"	White & Grey	250
	1"	White & Grey	150
	1 1/4"	White & Grey	80
	1 1/2"	White & Grey	60
	2"	White & Grey	40
 <p><b>PVC M.T.A.</b></p>	1/2"	White & Grey	250
	3/4"	White & Grey	250
	1"	White & Grey	140
	1 1/4"	White & Grey	96
	1 1/2"	White & Grey	175
	2"	White & Grey	175
 <p><b>F. SOCKET</b></p>	1/2"	White & Grey	240
	3/4"	White & Grey	150
	1"	White & Grey	75
	1 1/4"	White & Grey	50
	1 1/2"	White & Grey	190
	2"	White & Grey	130



Product	Inch	Colour	Pcs/Cart
 <p><b>PVC PLUG</b></p>	1/2"	White & Grey	200
	3/4"	White & Grey	150
	1"	White & Grey	75
	1 1/4"	White & Grey	100
	1 1/2"	White & Grey	50
	2"	White & Grey	40
 <p><b>PVC FEMALE TEE</b></p>	1/2"	White & Grey	
	3/4"	White & Grey	50
	1"	White & Grey	30
 <p><b>PVC SOCKET</b></p>	1/2"	White & Grey	200
	3/4"	White & Grey	120
	1"	White & Grey	300
	1 1/4"	White & Grey	50
	1 1/2"	White & Grey	150
	2"	White & Grey	100
 <p><b>PVC END CAP</b></p>	1/2"	White & Grey	150
	3/4"	White & Grey	75
	1"	White & Grey	50
	1 1/4"	White & Grey	75
	1 1/2"	White & Grey	50
	2"	White & Grey	40
 <p><b>PVC UNION</b></p>	1/2"	White & Grey	70
	3/4"	White & Grey	50
	1"	White & Grey	30
	1 1/4"	White & Grey	20
	1 1/2"	White & Grey	14
	2"	White & Grey	6
 <p><b>PVC FEMALE ELBOW</b></p>	1/2"	White & Grey	150
	3/4"	White & Grey	75
	1"	White & Grey	200
	-	-	-
	-	-	-
 <p><b>PVC REDUCER BUSH</b></p>	1/2" x 3/4"	White & Grey	300
	1/2" x 1"	White & Grey	200
	3/4" x 1"	White & Grey	200
	1/2" x 1 1/2"	White & Grey	70
	3/4" x 1 1/2"	White & Grey	70
	1" x 1 1/2"	White & Grey	70
	1 1/4" x 1 1/2"	White & Grey	70
	1/2" x 2"	White & Grey	40
	3/4" x 2"	White & Grey	40
	1" x 2"	White & Grey	40
	1 1/2" x 2"	White & Grey	40
	1 1/4" x 2"	White & Grey	40
	1 1/4" x 1"	White & Grey	100



 <p><b>PVC FEMALE REDUCER BUSH</b></p>	1/2" x 3/4"	White & Grey	100
	1/2" x 1"	White & Grey	75
	3/4" x 1"	White & Grey	75
	-	-	-
	-	-	-
 <p><b>PVC TEE</b></p>	<b>Size</b>	<b>Colour</b>	<b>PK List</b>
	25mm (PN 10)	Grey	350
	32mm (PN 16)	Grey	175
	50mm (PN 16)	Grey	110
	63mm (PN 16)	Grey	60
 <p><b>PVC ELBOW</b></p>	25mm (PN 10)	Grey	500
	32mm (PN 16)	Grey	250
	50mm (PN 16)	Grey	175
	63mm (PN 16)	Grey	75
 <p><b>PVC SOCKET</b></p>	25mm (PN 10)	Grey	850
	32mm (PN 16)	Grey	400
	50mm (PN 16)	Grey	250
	63mm (PN 16)	Grey	180
 <p><b>PVC N. SOCKET</b></p>	25mm (PN 10)	Grey	1000
	32mm (PN 16)	Grey	500
	50mm (PN 16)	Grey	300
	63mm (PN 16)	Grey	250
	-	-	-
<p><b>40MM</b> <b>90MM</b> <b>110MM</b></p>	Coming Soon		
 <p><b>FLEXIBLE CONDUIT</b></p>	20mm x 50m	Black, White	-
	25mm x 50m	Red & Blue	-
	25mm x 25m	Black, White	-
	32mm x 25m	Black, White	-
	40mm x 20m	Black, White	-
	50mm x 15m	Black, White	-
 <p><b>BRAIDED HOSE</b></p>	1/2	Yellow, Green & Clear	Light/Heavy Duty
	3/4	Yellow, Green & Clear	Light/Heavy Duty
	1	Yellow, Green & Clear	Light/Heavy Duty
	1 1/4	Yellow, Green & Clear	Light/Heavy Duty
	1 1/2	Yellow, Green & Clear	Light/Heavy Duty
	2	Yellow, Green & Clear	Light/Heavy Duty
<p><b>SUCTION HOSE</b></p>	2	-	-
	2 1/2	-	-
	3	-	-
	4	-	-

 <b>BOX ELBOW</b>	-		Yellow	-
	-		Red	-
	-		Blue	-
	-		Green	-
	-			-
 <b>SAFETY HELMET</b>	<b>Brand</b>		<b>Colour</b>	
	Faris H.D		 White	 Red
	-		 Yellow	 Orange
	-		 Dark Blue	 Light Green
	-		 Light Blue	 Grey
 <b>SPACER</b>	<b>Size</b>			
	30 mm			
	40 mm			
	50 mm			
	-			
	-			
 <b>SHIM PAD</b>	2 mm			
	3 mm			
	5 mm			
	10 mm			
 <b>HOOKAH PIPE</b>	16 mm	 White	 Red	
	-	 Yellow	 Orange	
	-	 Dark Blue	 Light Green	
	-	 Light Blue	 Grey	
	-			
 <b>CTO CARTRIDGE FILTER</b>	10"			
	20"			
	-			
 <b>YARN PP FILTER</b>	10"			
	20"			
	-			
 <b>PROFILE PIPE</b>	<b>Size</b>		<b>Colour</b>	
	20cm x 20cm		Black & White	
	25cm x 25cm		Black & White	
	-		-	
 <b>SIDE CORE</b>	82cm x 82cm		Black & White	
	102cm x 102cm		Black & White	
	 <b>SIDE CORE</b>			





مصنع النجوم للخزانات البلاستيكية (ذ.م.م.)  
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