



MAGIC-FLOAT

## FLOAT For Various Sizes of Solar Panels

Easy & Fast Installation

- © Floating Solar Farm Design/Construction
- © Floating Dock Design/Construction
- © Float distributed, Float Custom-made



Land Precious



Green Energy



Environmentally Friendly

MAGIC-FLOAT Enterprise Co., Ltd.





## Development history

The **MAGIC-FLOAT**<sup>®</sup> Modular Floating System started from 1989 and has been developed and applied to numerous engineering constructions for many years up to today. Succeeding to Magic-Float Generation I, Magic-Float Generation II, III, IV, V, VI, VII, VIII and IX (specially for support solar panel) were developed with new techniques as a more robust and versatile system. International patented unique design Magic-Float system, enhanced products are widely used in various water works. Environmental friendly material, simple and quick assemble, strong and safe, easy to use, an innovative technology for floating engineering constructions.



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# Solar Panel Float

Solar Panel Float are made for solar panel, the main float can support and hold many kinds of solar panels with different heights thanks to the unique slideable clamping unit design.

As 3D diagram showing, heights of two ends of the main float are not the same, therefore the top of the float is sloped, which enable solar panel to expose to sunlight effectively.

The main float has sliding groove on the top, the clamping unit has clip which can be moved in the groove relative to the float body, and to hold different heights of solar panels. Magic-Float solar float can work with many solar panels with different heights significantly increase their versatility and provide an innovative way to easily replace solar panels.

The solar float support solar panel by the clamping unit, solar panel can expose to sunlight at an appropriate angle, improve the efficiency of solar panel to absorb light energy.

In addition, since the solar float can float solar panel on water, it can be installed in a large area in a dam or lake, no need to occupy lands.

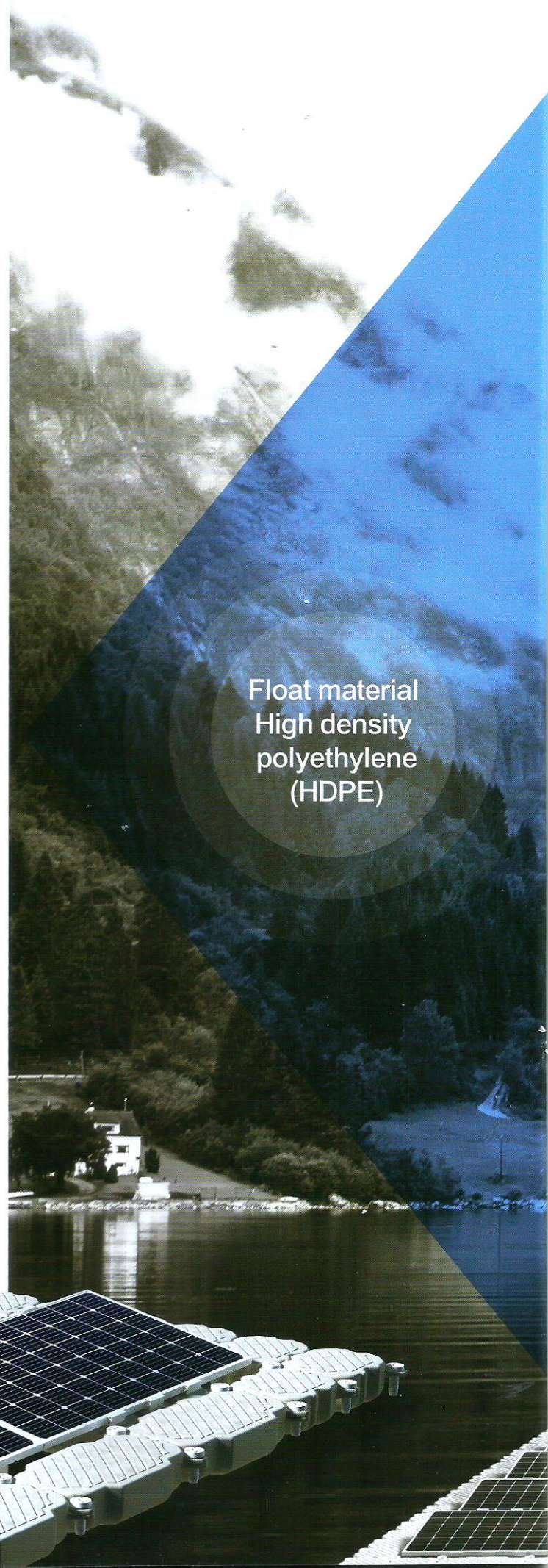
Furthermore, you can connect walkway to either side of the solar float, convenient for installation, removal and maintenance works.

SP-101 Limited to sales in Southeast Asia

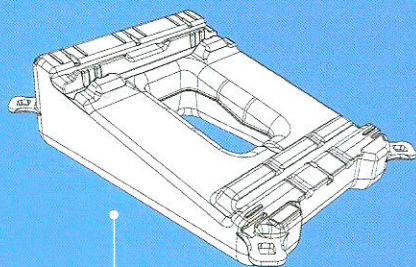
SP-102 Limited to sales outside of Southeast Asia

IX generation modular float product introduction  
Apply patents worldwide

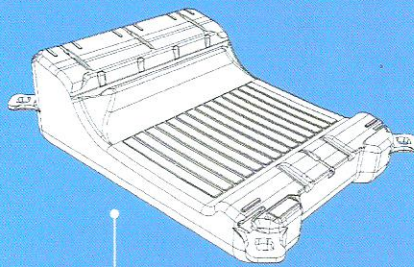
Float material  
High density  
polyethylene  
(HDPE)



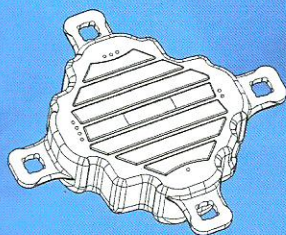




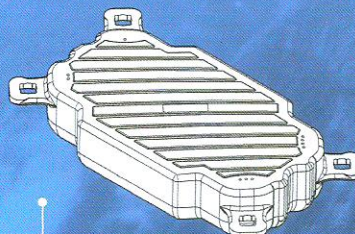
model :	SP-101
Solar Main Float I	Buoyancy about 198kg
Specifications :	Length 120.2cm
	Width 85.4cm
	Height 20/40.6cm



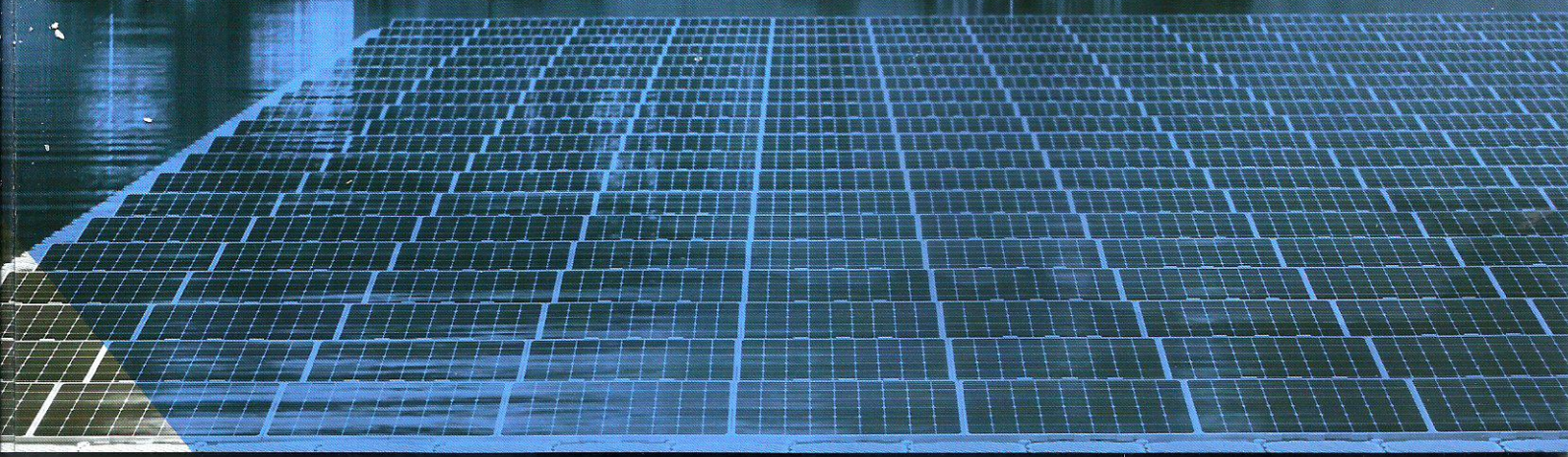
model :	SP-102
Solar Main Float II	Buoyancy about 190kg
Specifications :	Length 120.2cm
	Width 85.4cm
	Height 20/40.6cm



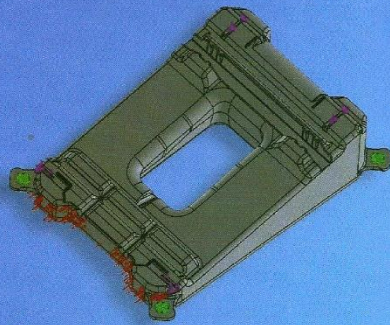
model :	SP-302
Walkway Float, vertical II	Buoyancy about 28kg
Specifications :	Length 45cm
	Width 40.1cm
	Height 20cm



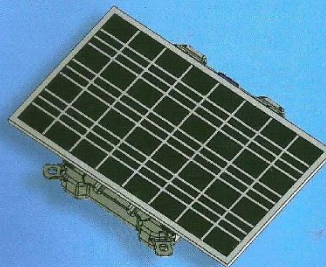
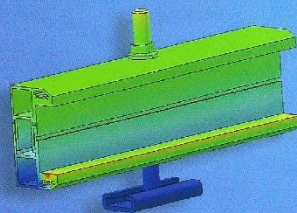
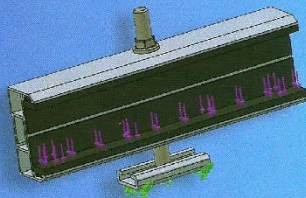
model :	SP-202
Walkway Float, horizontal II	Buoyancy about 65kg
Specifications :	Length 85.4cm
	Width 40.2cm
	Height 20cm





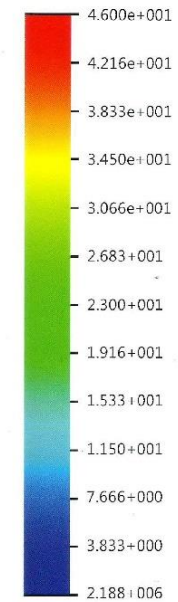


## Float Test Chart ANSYS Software Simulation Analysis



- Wind Force analysis: the solar float can withstand wind force 56.1 m/s  
The solar float can withstand diagonal force of 1750 kg  
The solar float can withstand adjacent force of 2070 kg  
Buoyancy: Solar panel platform can support more than 100kg per square meter  
Solar Float can withstand high and low temperature without structural doubts

von Mises (N/mm<sup>2</sup> [MPa])







## Application

### Solar Float Application

By installing solar panel float in reservoirs, water evaporation and algae can be suppressed, thus improve water quality. Also, since water can quickly cool the heat around solar panels, it is 10 -15% more power than solar panels on land.

Solar panel supported by Solar Float can be install on water



Water purification pond



Idle pond



Fish farm



Industrial reservoir



Dam



Reservoir





## Advantages

### Solar Float features and advantages

- Easy assembly and disassembly, unlimited expanding area
- Modular structure, simple construction, short working hours, quick and easy installation
- High strength material, long product life, excellent durability
- Anti-freezing, anti-corrosive, anti-UV, unaffected by seawater, chemicals, grease or shellfish
- High buoyancy and stability, good bearing capacity, allowing personnel to work safely on the floating platform
- Eco-friendly technology products, no worry of pollution or environment destruction
- Solar panels of different sizes can be installed, versatility increase
- Solar panels surrounding by walkways for easy disassembly, repair and maintenance
- Solar float can store cables in the special designed cable storage tank of float, protecting cables and better looking
- Interlocking design of four sides of float, can withstand higher shear force, enhance the structural strength of floating platform







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