rotomo®

FLOAT MODULES

POLYETHYLENE-BASED

ROTOMO.RU

CONTENT

Rotomo manufactures large plastic products by rotational molding, which provides for a hollow monolithic polymeric product of virtually any configuration with no welding seams.

The company staff of skilled specialists has been working in the plastic processing since 2008. We make efficient use of modern technologies as well as state-of-art advances in the chemical industry.

Rotomo supplies products for a wide variety of consumers all over Russia and the Customs Union countries. Our clients are the companies and organizations from various industries, urban planning, agriculture and housing and municipal services. Construction and installation contractors operating in the area of external engineering utilities actively use our plastic wells, penetration tanks, and the components of industrial treatment systems of storm water and household sewage. Oil & gas and mining companies are interested in our developments for equipping floating coal slurry pipelines with plastic floats with a special design providing for pipeline keeping on the water surface. The aquaculture companies use our mounting parts for the assembly of fish-farming cages from HD polyethylene pipes. In addition, we offer polyethylene float modules as an alternative option for HD polyethylene pipes. The present catalogue describes float modules. Besides, it presents floating structures manufactured based on our modules.

Our customers are businessmen, touristic business owners, owners of spa resorts and recreational facilities. Installation companies, marketing cooperatives, industrial and agricultural companies, individuals who love outdoor activities, fishing, motor boating use our floats for construction of marinas, quays of stationery and self-propelled pontoons.

Today our products include 3 types and 11 modifications of float modules.

The high quality and excellent operation characteristics of our plastic devices are achieved by using of modern chemical additives and staining agents. Our company developed the technology of polystyrene foaming inside plastic devices, which significantly improves the float module durability and safety comparing to our competitors.

GENERAL OVERVIEW MODULE TYPES

Plastic float modules are used in pontoon construction, pontoon motor boats, quays, houses and bath houses

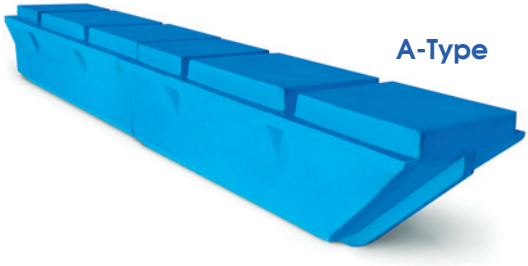
on the water, other floating engineering and hydraulic structures.

Float modules are manufactured by polyethylene rotational molding. Monolithic devices do not have seams and joints, they are durable, light- weight and reliable. Products are not subject to corrosion, resistant to precipitation and UV and any temperature conditions. Such large-dimensional floats have an excellent floatation ability depending on its dimensions and a load degree. The module configuration provides for fast and easy assembly of floating structures.

Modules are interconnected by metal or wooden joists and the mounting kit on which decking or various types of secondary structures can be installed.

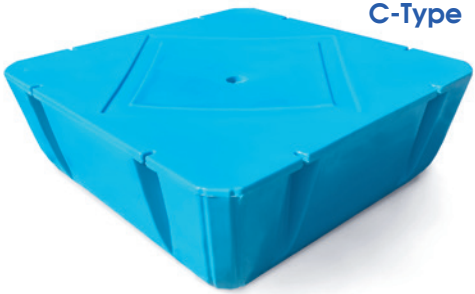
Plastic float modules are cheap and lightweight compared to similar metal and concrete products. In addition, they have longer operation life as they are not subject to corrosion.

Our float modules provide for reliable and long-term float structures at reasonable price. The floats are produced only of **primary polyethylene with the coloring agents resistant to discoloring**. The service life of polyethylene floats **exceeds 50 years**.



A-Type

B-Type



C-Type

A-TYPE

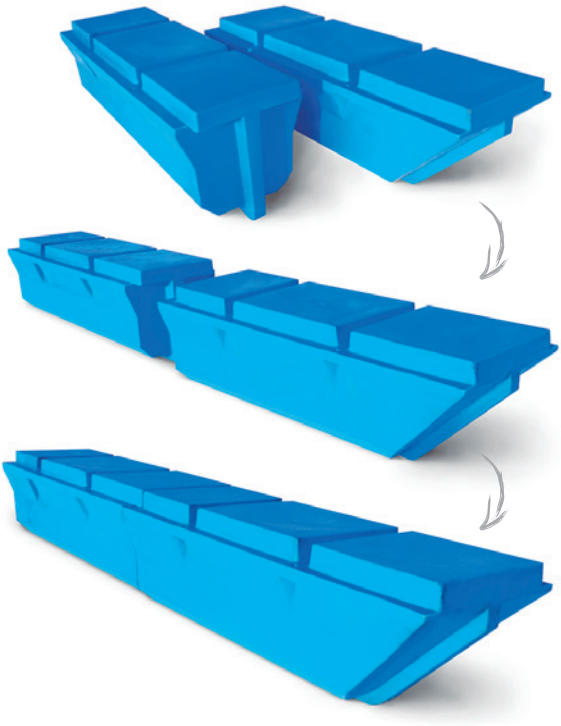
DESCRIPTION. MODIFICATIONS. SPECIFICATIONS

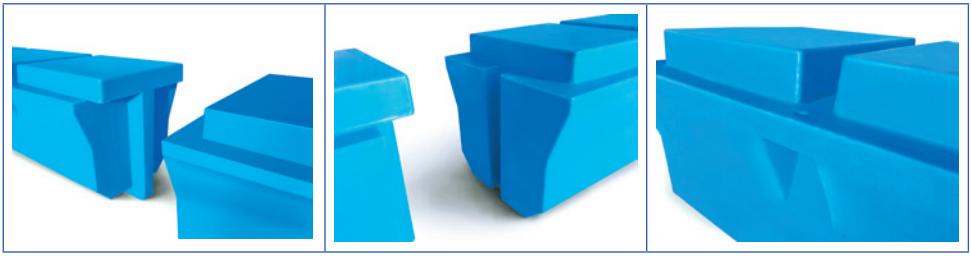
The plastic float module A-250 was manufactured as a basic component for construction of pontoon motorboats and self-propelled pontoons. Two forms of modules – nose and middle ones - provides for easy manufacturing of floatation devices for lakes and light-flow rivers.

In addition, the A-type modules proved to be efficient and reliable when used as a part of stationery floating structures with a small bearing capacity, i.e. riverside pontoons, quays, fish-farming cages.

Polyethylene floats are manufactured by rotational molding, i. e. devices do not have welding seams, the wall thickness is of 6 - 9 mm. Each float can bear the load of up to 250 kg with a draft of not more than 2/3 of the float height.

The end product part is equipped with guides used to arrange float chains. Such structure provides a rigid fixation of floats at the base of a floating structure eliminating the possibility of float displacement against each other when they are used in self-propelled pontoons or at a high wave as a part of a stationery pontoon.





The upper part of floats have the grooves for the frame and joists installation for boarding as well as the holes to fix the frame and decking to the float framework.

SPECIFICATIONS

	Middle module A-250C	Nose module A-250H
End view		
	Guides for hitching from both ends	From one end for the miter 45° The second end has the guideways for hitching
General length, mm	1800	1800
Length in engagement, mm	1720	1800
Width, mm	620	620
Height, mm	590	590
Weight, kg	25	25
Load, kg	250	250

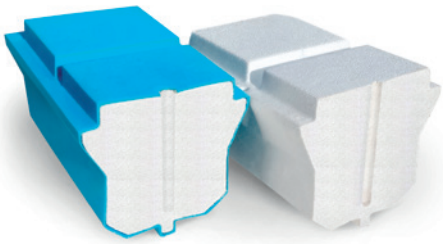
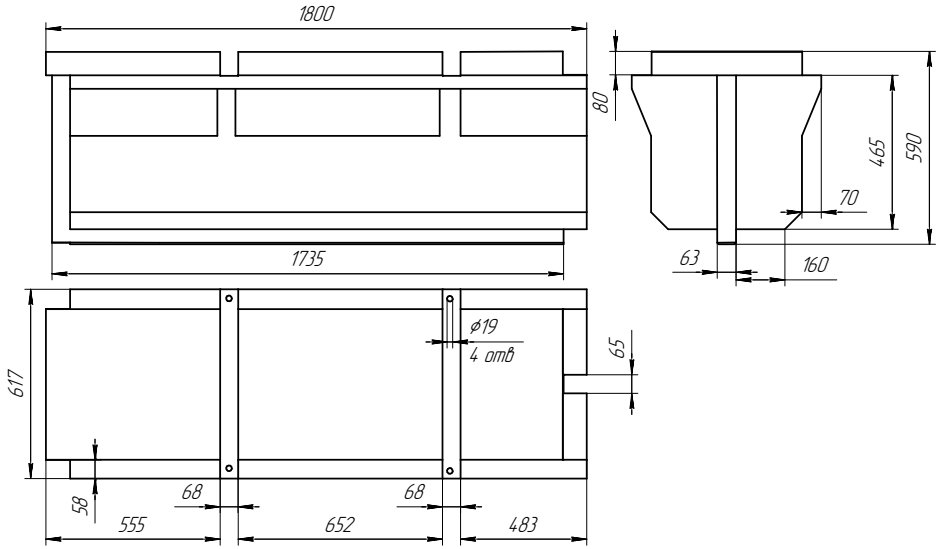
	Middle module with plastic foam A-250СП	Nose module with plastic foam A-250НП
		
	Guides for hitching from both ends	From one end for the miter 45° The second end has the guideways for hitching
General length, mm	1800	1800
Length in engagement, mm	1720	1800
Width, mm	620	620
Height, mm	590	590
Weight, kg	30	30
Load, kg	250	250

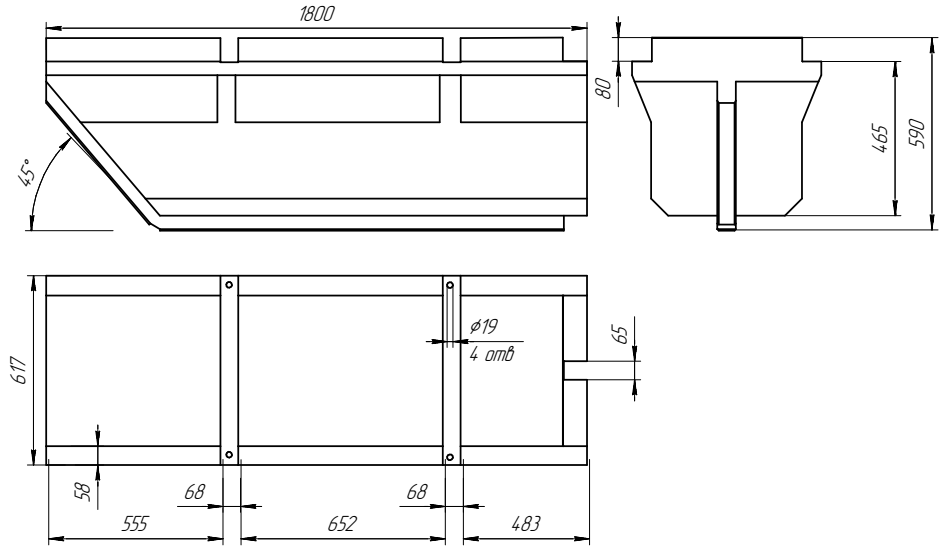
TABLE OF LOAD AND DEPTH COMPLIANCE

Depth, mm	Module load, kg	
	A-250C	A-250H
100	86	72
200	177	145
300	258	230
400	354	314
500	430	402
600	516	485

DIMENSIONS A-250C



DIMENSIONS A-250H



A-TYPE MODULES–BASED PONTOONS WITH DECKING

With A-type float modules you can manufacture pontoons with decking and a small bearing capacity, practically of almost any configuration allowing fastening the module frame to the pontoon framework.

PROCEDURE OF MODULAR PONTOON ASSEMBLY

1. The float chains are made. The length and width apart is customary.
2. The frame is installed into the grooves on the float framework.
3. The frame is fixed with bolts.
4. Boarding is installed.

WE OFFER STANDARD CONFIGURATIONS OF A-TYPE MODULES-BASED PONTOONS WITH WOODEN DECKING

The basis of pontoon construction are cast plastic floats without welding seams. The float structure provides for grooves and recesses for decking installation and its fixation.

We offer several types of structures with the application of such floats. These are ready-made pontoons with various bearing capacities which can be component parts of a large floating structure – quay, float bridge or a pontoon complex for recreation on water.

LIGHT PONTOON

Width, mm	Length, mm	Height, mm	Number of floats, pcs.	Useful load*, kg
2400	6000	660	4	520

MIDDLE PONTOON

Width, mm	Length, mm	Height, mm	Number of floats, pcs.	Useful load*, kg
2400	4000	660	4	680
2400	6000	660	6	1020

HEAVY PONTOON

Width, mm	Length, mm	Height, mm	Number of floats, pcs.	Useful load*, kg
2400	4000	660	6	1180
2400	6000	660	9	1770

SELF-PROPELLED PONTOON

Width, mm	Length, mm	Height, mm	Number of floats, pcs.	Useful load*, kg
2400	4000	660	4	680
2400	6000	660	6	1020
2400	4000	660	6	1180
2400	6000	660	9	1770

FLOATING PLATF ORM

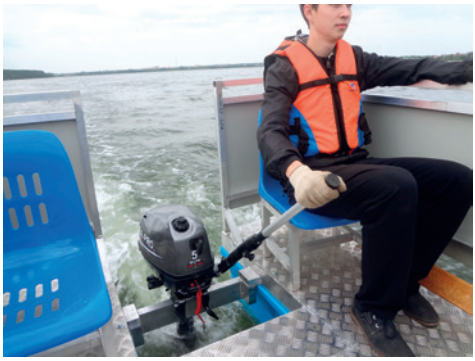
Width, mm	Length, mm	Height, mm	Number of floats, pcs.	Useful load*, kg
6000	6000	660	12	1800
6000	6000	660	15	2550
6000	6000	660	18	3300
6000	6000	660	21	4050

* *Indicator of a total permitted load which is equally distributed over a total area of a floating platform is supplied in a disassembled floating structure at the draft of no more than 2/3 of the float height. The calculation form as a kit of floats, prepared bridging and is made for the case when larch decking boards are used. larch decks.*

SELF-PROPELLED PONTOONS AND KAIRAN PONTOON MOTORBOATS

A good example of a dedicated application of the A-type float modules are self-propelled pontoons and Kairan pontoon motorboats. The frame of floating structures, broad sides and a deck is manufactured from aluminum.

КАЙРАН®
понтонный катер



WE OFFER TYPICAL SIZES AND CHARACTERISTICS OF MOTORBOATS AND PONTOONS SELF-PROPELLED

PONTOON KAIRAN A418S

The self-propelled pontoon KAIRAN A418S is based on four A-type float modules– two nose and two middle ones. An aluminum frame, a deck, broadsides and a stern.

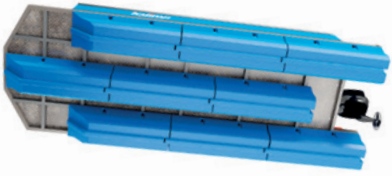
Stern height: **S**
Module type: **A**
Module number: **4 pcs.**
Structure width: **1,8 m**
Structure length: **4 m**
Deck height: **0,66 m**
Permitted distributed load: **0,68 tons**
Draft at maximum load: **2/3 of a module**
Permitted engine capacity: **up to 10 h. p.**
Filled with fom plastic: **yes**
Weight: **440 kg**

PONTOON KAIRAN A624

Stern height: **S**
Module type: **A**
Module number: **6 pcs.**
Structure width: **2,4 m**
Structure length: **6 m**
Deck height: **0,66 m**
Permitted distributed load: **1,02 tons**
Draft at maximum load: **2/3 of a module**
Permitted engine capacity: **up to 60 h. p.**
Filled with fom plastic: **yes**
Weight: **820 kg**

PONTOON KAIRAN A924

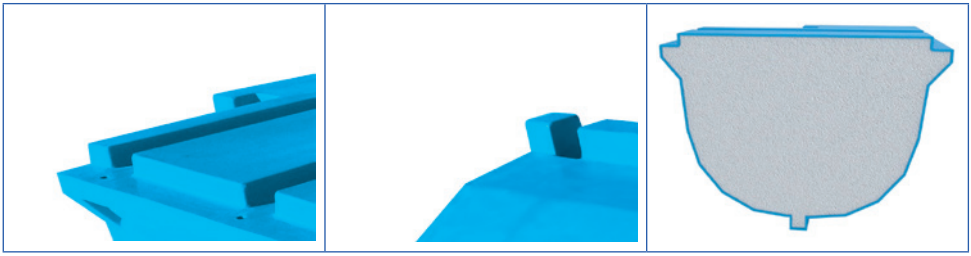
Stern height: **S**
Module type: **A**
Module number: **9 pcs.**
Structure width: **2,4 m**
Structure length: **6,5 m**
Deck height: **0,66 m**
Permitted distributed load: **1,75 tons**
Draft at maximum load: **2/3 of a module**
Permitted engine capacity: **up to 60 h. p.**
Filled with fom plastic: **yes**
Weight: **910 kg**



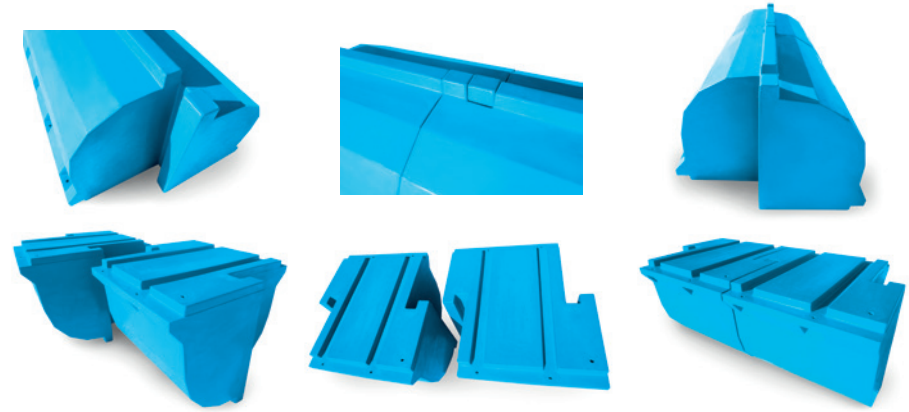
B-TYPE

DESCRIPTION. MODIFICANTIONS. SPECIFICATIONS

The plastic float module B-400 is the basis of floating structures at the construction of stationery and self-propelled pontoons, water houses, quays, etc. with an average bearing capacity. The module has two forms – middle and nose (stern) ones.



The module has the grooves and holes used to install and fix steel or wooden frames, bridging or decking. The frame is fixed with bolts. The polyethylene modules feature an increased durability due to plastic foaming inside the module. The connection of modules with each other is performed by the principle "mortise-tenon". Any number of modules can be engaged in a chain.



The chain ends, as a rule, have a nose (stern) module installed with a rounding at one of the sides.

SPECIFICATIONS

	Middle module B-400C	Nose module B-400H
		
General length, mm	1105	1260
Length in engagement, mm	1010	1260
Width, mm	1165	1165
Height, mm	835	835
Wall thickness, mm	8-25	8-25
Weight, kg	35	35
Load, kg	400	400

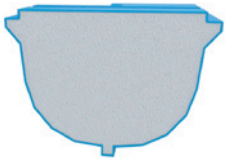
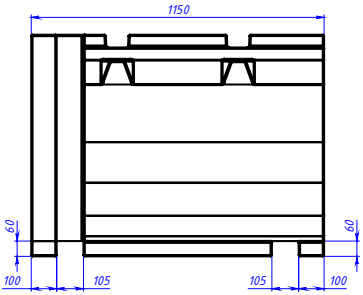
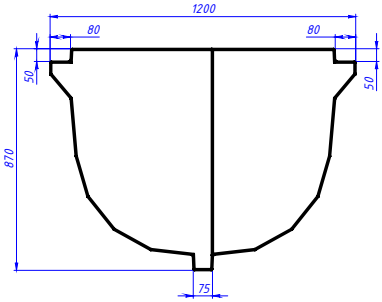
	Middle module with foam plastic B-400СП	Nose module with foam plastic B-400НП
		
General length, mm	1105	1260
Length in engagement, mm	1010	1260
Width, mm	1165	1165
Height, mm	835	835
Wall thickness, mm	8	8
Weight, kg	45	45
Load, kg	400	400

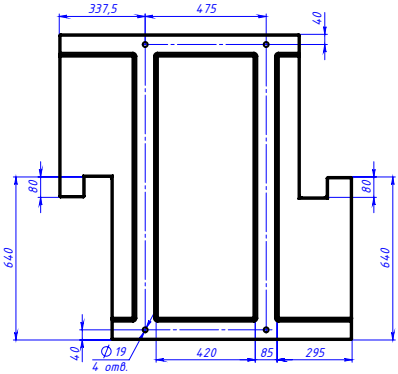
TABLE OF LOAD AND DEPTH COMPLIANCE

Depth, mm	Module load, kg	
	B-400C	B-400H
100	20	10
200	80	40
300	160	100
400	250	180
500	340	270
600	440	380
675	510	460
770	610	590
870	710	710

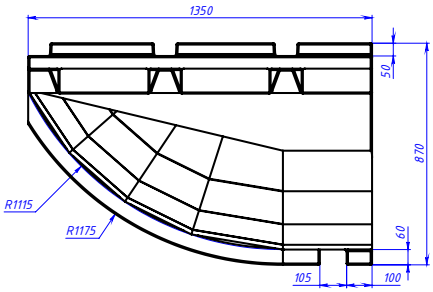
DIMENSIONS B-400C

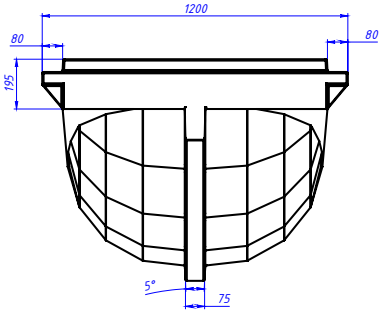


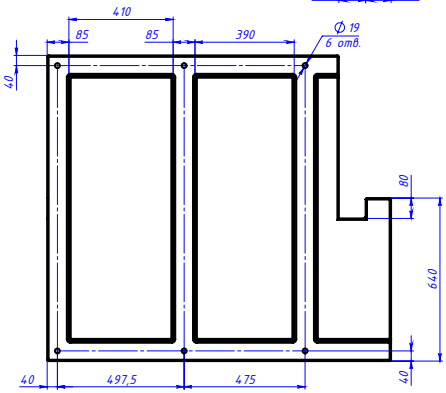




DIMENSIONS B-400H







B-TYPE MODULES-BASED DISMOUNTABLE SELFPROPELLED FLOATING PLATFORMS

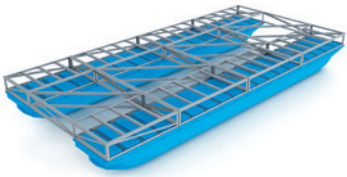
Our engineers developed typical dismountable floating platforms with various dimensions and bearing capacities specially for floating structures with an increased bearing capacity.

FLOATING PLATFORM ПС-B12/4000/6000

Module type: **B**
Module number: **12 pcs.**
Structure width: **4 m**
Structure length: **6 m**
Permitted distributed load: **4 tons**
Draft at maximum load: **2/3 of a module**
Weight: **1200 kg**

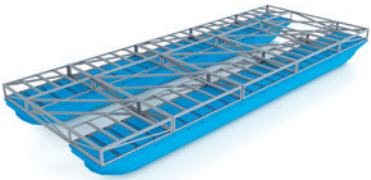
FLOATING PLATFORM ПС-B18/4000/8700

Module type: **B**
Module number: **18 pcs.**
Structure width: **4 m**
Structure length: **8.7 m**
Permitted distributed load: **6.2 tons**
Draft at maximum load: **2/3 of a module**
Weight: **1720 kg**



FLOATING PLATFORM ПС-B22/4000/10580

Module type: **B**
Module number: **22 pcs.**
Structure width: **4 m**
Structure length: **10.58 m**
Permitted distributed load: **7.6 tons**
Draft at maximum load: **2/3 of a module**
Weight: **2200 kg**



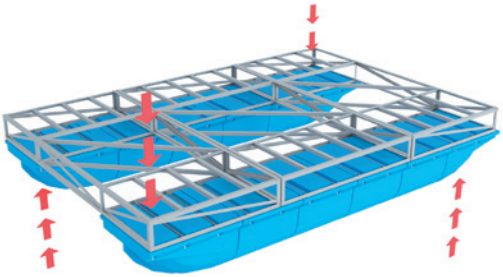
FLOATING PLATFORM ПС-B27/6000/8700

Module type: **B**
Module number: **27 pcs.**
Structure width: **6 m**
Structure length: **8.7 m**
Permitted distributed load: **9.5 tons**
Draft at maximum load: **2/3 of a module**
Weight: **2500 kg**

FLOATING PLATFORM ПС-B33/6000/10580

Module type: **B**
Module number: **33 pcs.**
Structure width: **6 m**
Structure length: **10.58 m**
Permitted distributed load: **11.7 tons**
Draft at maximum load: **2/3 of a module**
Weight: **3140 kg**

Please, note that metal frames have a spatial structure due to which pontoons can bear a significant torsion load. This feature increases the total rigidity of the pontoon, ensures the durability and long life of structures on the pontoon.



PRINCIPLE OF B-TYPE MODULES-BASED PONTOON ASSEMBLY

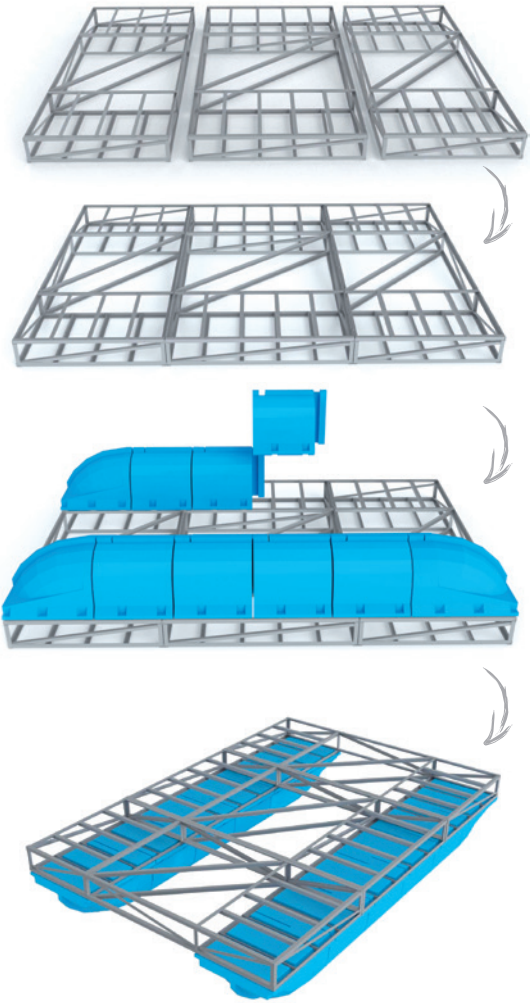
It is recommended to start the assembly from connecting spatial frames. The frames are put onto a flat surface with the top placed down. They are fixed with bolts.

Then, a chain of float modules is put onto frames into the grooves. The float modules and frames are also fixed with bolts.

The pontoon is assembled. One needs only to turn it up and put on the water. At this stage lifting equipment may be necessary, it depends on pontoon dimensions.

It is possible to manufacture a stern on the pontoon frame for a suspended outboard engine. It is recommended to manufacture boarding from water resistant materials.

The B-type modules-based pontoons are filled with foam plastic and thus can be left ice-bound for winter. It is not necessary to dismount them for winter providing the value of distributed load is correct.



C-TYPE

DESCRIPTION. MODIFICANTIONS. SPECIFICATIONS

The plasticfloatmoduleC-400 is the basis of stationery floatingstructures, i.e. quay, spontoons and other floating structures with an average bearing capacity The module have the holes for fixing steel or wooden hoists and bridging.

There are two module modifications:

- filled with foam plastic
- with light-emitting diodes insida the modules used to manufacture luminous pontoons

SPECIFICATIONS

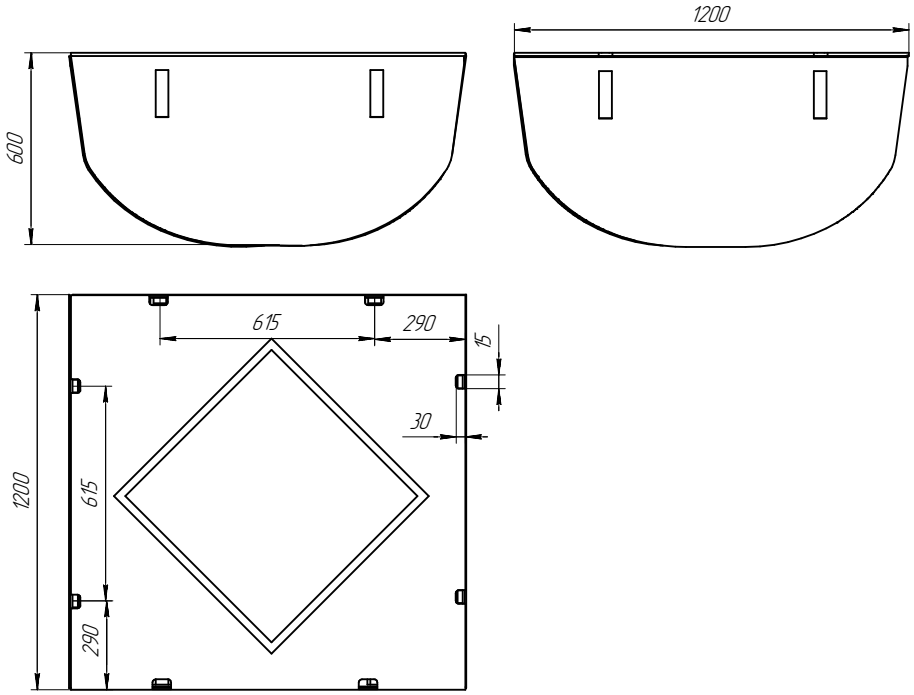
	Module C-400

General length, mm	1200
Width, mm	1200
Height, mm	600
Wall thickness, mm	6-9
Weight, kg	23
Load, kg	400

TABLE OF LOAD AND SUBMERSION DEGREE CORRELAION

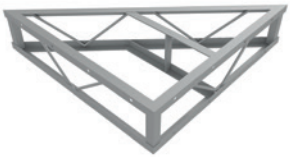
Depth, mm	Module load, kg
100	33
150	74
200	129
250	190
300	254
350	321
400	388
450	458
500	530
550	603
600	678

DIMENSIONS C-400



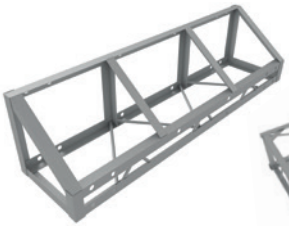
PARTS OF S-TYPE MODULES-BASED DISMOUNTABLE FLOATING PLATFORMS

Our engineers developed six basic parts – steel spatial structures allowing for assembling of a floating structure of almost any configuration on the modules of the type C.



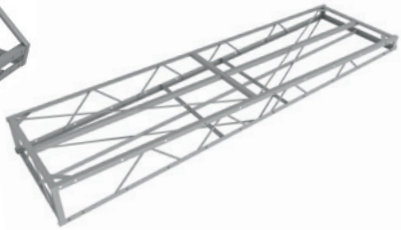
PONTOON STABILIZING DEVICE

Structure width: **0.9 m**
Structure length: **0.9 m**
Weight: **40 kg**



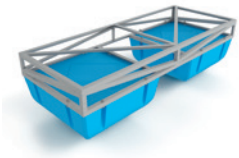
PONTOON CONNECTOR

Structure width: **1.2 m**
Structure length: **0.3 m**
Weight: **40 kg**



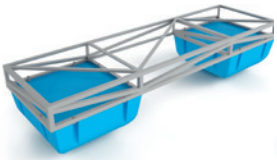
ANGWAY

Structure width: **1.2 m**
Structure length: **3 m**
Permitted distributed load: **0.4 tons**
Weight: **70 kg**



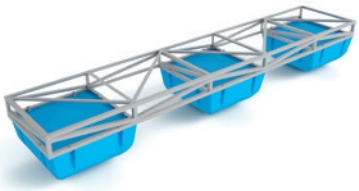
FLOATING STRUCTURE 1200 x 3000 mm

Module type: **C**
Module number: **2 pcs.**
Structure width: **1.2 m**
Structure length: **3 m**
Permitted distributed load: **0.68 tons**
Draft at maximum load: **2/3 of a module**
Weight: **160 kg**



FLOATING STRUCTURE 1200 x 4000 mm

Module type: **C**
Module number: **2 pcs.**
Structure width: **1.2 m**
Structure length: **4 m**
Permitted distributed load: **0.64 tons**
Draft at maximum load: **2/3 of a module**
Weight: **206 kg**



FLOATING STRUCTURE 1200 x 6000 mm

Module type: **C**
Module number: **3 pcs.**
Structure width: **1.2 m**
Structure length: **6 m**
Permitted distributed load: **0.96 tons**
Draft at maximum load: **2/3 of a module**
Weight: **310 kg**

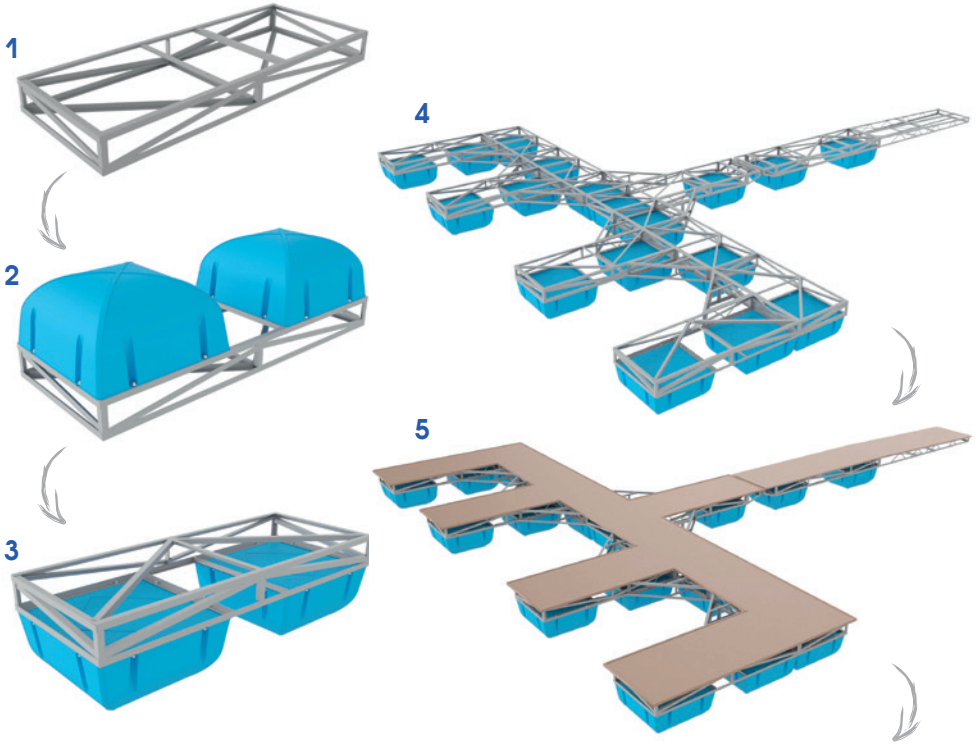
PRINCIPLE OF C-TYPE MODULES-BASED PONTOON ASSEMBLY

Basic parts with float modules are interconnected with bolt fixing. Using three standard parts one can assemble the platform with necessary dimensions.

For the dynamic connection device a connector is used. This connector is fixed to the end of the basic part with modules.

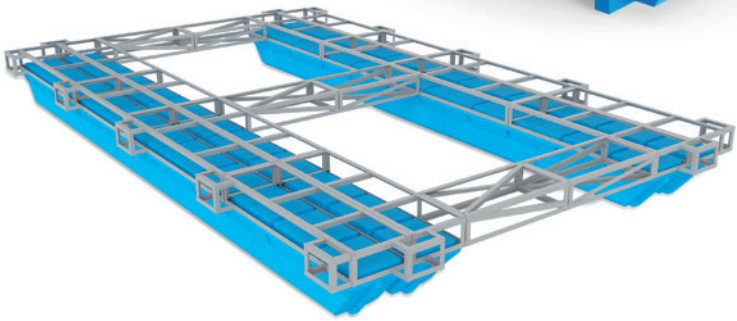
To make the structure more rigid, a stabilizing device is installed in its angular parts.

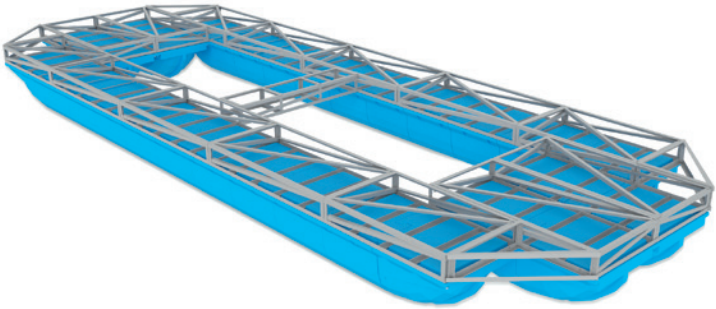
To connect the platforms with a shore, a gangway is used.



FLOAT MODULES IN TEMPORARY PONTOONS CONSTRUCTION

Our float modules are widely used to build floating structures with industrial, commercial and fishfarming intended uses. As a rule, they host temporary equipment, such as pumps, hoists, lifting devices, etc. Here are some examples of such structures.





IMPLEMENTED PROJECTS

2018. Float modules of the B type were applied at the infrastructure development of the waterfront of the Meshcherskiy pond in Moscow.

2017. Buryatia, lake Yermak. Our float modules are the base for the construction of a cage fishery line.

2015. The winter bathing and cold water treatment club «Kristal» in Tyumen is onstructing a hypaethral swimming pool from the floats produced by our company. To make the pool, the club bought 52 floats - for the pool with the 8 m width and the 25 m length.

2016. Pontoon construction for a bath-house of the bath laboratory «Kedrovy Rai», Chelyabinsk.

2014. Our float modules were used for the construction of a floating stage at the preparation of the theatre and cinema festival «In the Bosom of the Family». The festival was conducted in Irkutsk at a picturesque site where Angara inflows in Baikal.

Dozens of self-propelled pontoons and pontoon motorboats at our float modules furrows the lakes and rivers in Russia and Kazakhstan.

rotomo®

Limited Liability Company «Manufacturing Company «Rotomo»

Russia, Chelyabinsk, Lenin Prospekt, 21V, office 614
tel.: +7 (351) 247-60-16

Manufacturing address: Chelyabinsk region, Korkino 39A
Proletarskaya Str. (production facility Zhilkomsnab)