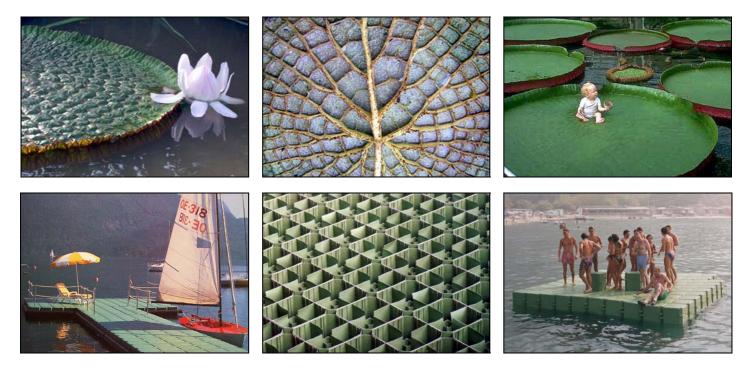




IDEA Innovation instead copy

Bionics (also known as biomimicry or biomimetics) is the application of biological methods and systems found in nature to the study and design of engineering systems and modern technology. The word "bionic" possibly originating from the Greek word "bion", meaning "unit of life" and the suffix -ic, meaning "like". The transfer of technology between lifeforms and synthetic constructs is, according to proponents of bionic technology, desirable because evolutionary pressure typically forces living organisms, including fauna and flora, to become highly optimized and efficient. A classical example is the development of dirt- and water-repellent paint (coating) from the observation that the surface of the lotus flower plant is practically unsticky for anything (the lotus effect). Examples of bionics in engineering include the hulls of boats imitating the thick skin of dolphins; sonar, radar, and ultrasound imaging imitating the echolocation of bats. Also the Maritime Technic Pontoon System has its origin in nature. Model for that floating dock system was the leaf of giant water lilies (*Victoria sp.*).



Victoria is the genus of giant water lilies in the plant family Nymphaeaceae. The british explorer Sir Robert Schomburgk from the Royal Geographic Society named in 1837 the plant after their Queen Victoria - *Victoria regia*. The two vallid species today are: *Victoria amazonica* (Syn: *V. regia*) native to the Amazon River basin, and *Victoria cruziana* (Syn.: *V. trickeri*) native to the Paraná River basin, both in South America. The water plants of this genus have very large leafs, up to 2 m in diameter on a stalk 6-8 m in length, that float on the water surface and support a weight of up to 50 kg. Stability and float capacity is achived by a supporting frame on the underside of the leaf which includes chambers filled with air. The flowers of the plants bloom usually in September (July-December) but opens only two times at dusk, the first night they are white and become pink the second night. They are about 30 cm in diameter, and are pollinated by beetles. The inseminated flower sinks to the ground, where the seeds develop.

"Inspired by nature"





FLOATING ELEMENTS of the third generation



25 years experience in "state of the art" flotation engineering worldwide, together with cutting edge technology and the most advanced production techniques are the base for the new, extremely versatile "Pontoon Building - Block System". By utilising the friction co-efficient achieved by independently controlled flooding of the modules we have refined this system to provide not only the most stable floating platform available, but also a high load capacity, which can also be combined with a fender-sidebar system.



The individual modules are easy to handle (weight: 6.2 kg) and have a very high load capacity of 360 kg/m2 (=75 lbs/sq ft). They are made of a high-quality synthetic, UV-stabilized and anti-static material (green or blue), which is extremely resistant to the elements. Individual blocks measure 50x50x50 cm (1.65x1.65x1.65 ft) and the standard freeboard is approximately 40 cm. Blocks are easily assembled (with an assembling wrench) by joining the connecting lugs with bolts that give a secure and stable connection.



These building blocks can be assembled to meet any desired layout or dimensions, and can be used to replace or extend existing pontoon systems. This seawater- and acid-resistant system requires no maintenance or cleaning and is extremely durable. It can be utilised throughout the year or the modules can be stacked and stored. Unlike closed floats, this system does not blow up in the sun and is resistant to attacks from *Teredinidae*.



Unlike conventional wooden floats, the pontoons are made of a skid-proof material, and will not rot or develop sharp edges, or expose rusty nails etc. The "Maritime Technic - Pontoon System" contributes to water purity and is aesthetically pleasing. It has lugs (ears) along the sides where different accessories can be fitted and anchoring systems attached.



Swimming ladders safety rails, anchor fastening and and boat -mooring-eyes are the main accessories, with options such as side screws and bars as well as fenders, ropes and anchors. If needed, access ramps and gangways can be produced to the customer's design. For marinas electricity distributors (w/wo illumination) and water supply-systems are available.

An Austrian invention, patent pending.





MODULAR FLOATING DOCK SYSTEM for aquatic sports, aquaculture and environmental protection

Essential advantages:

- ✓ Individually designable layout
- ✓ Easy self assembling
- ✓ Low single weight
- ✓ High load capacity
- ✓ More stability
- ✓ UV- and seawater resistant
- ✓ Absolutely maintenance free
- ✓ Practically everlasting
- ✓ Highly economic

Application examples:

- Floating docks and jetties
- Boat berths and stages
- Walkways and rafts
- Swimming islands
- Transport rafts
- Emergency bridges
- Working platforms
- Netcage systems
- And much more!

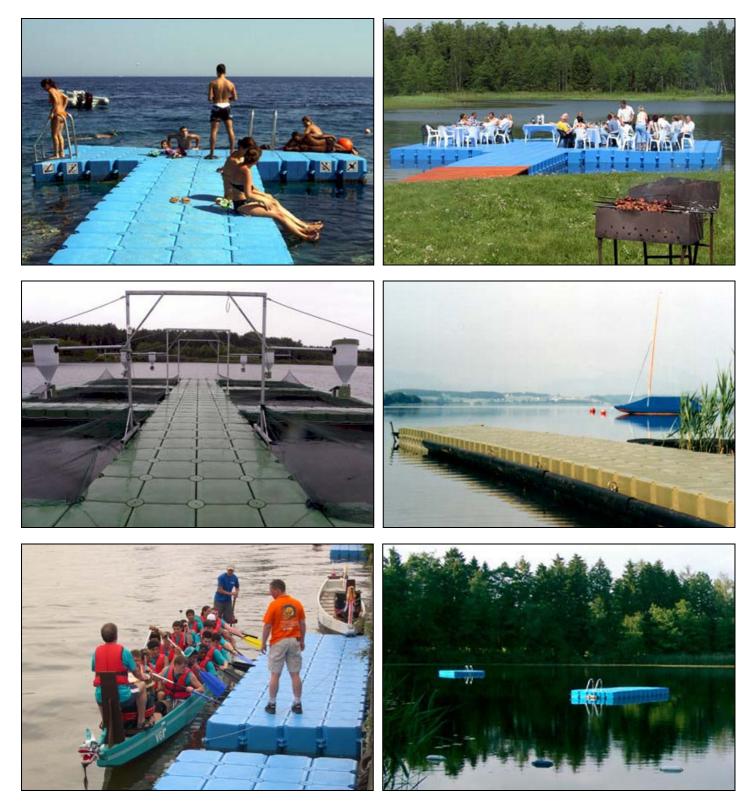


Made in the European Union!





EXAMPLES Layout possibilities

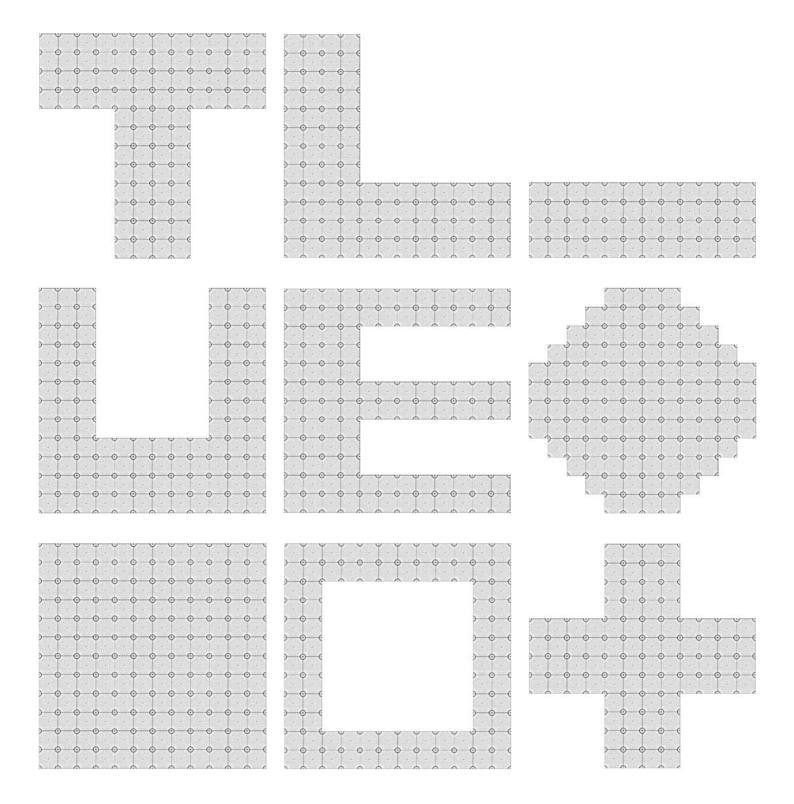


Quality for reasonable prices!





FORMS Layout possibilities



Consulting and sales:





REFERENCES in Europe

Austria: Auftrieb Werbe GmbH. 1190 Vienna **Belgium:** Vereniging voor Watersport, 9160 Lokeren Croatia: Hobby d.o.o., 52210 Rovini Danmark: Dansk Pontona Generalagentur, 3630 Jaegerspris Finland: Fam. Otmar Schoitsch, 99300 Muonio France: Société d'Automatisme de Services et d'Instrumentation Sarl, 67760 Gambsheim Germany: Landesverband Saarländischer Segler e.V., 66123 Saarbrücken Great Britain: Crescent Marine Services Ltd., ME2 4HA Rochester Greece: Ev. Silogides & Co. EE, 18531 Piraeus Hungary: Abar-Max Kft., 2340 Kiskunlacháza Italy: Società Canottieri, 20144 Milano Lithuania: UAB "Roris" Ir Ko, 20343 Ukmergés Luxemburg: Societe Electrique de L'Our S.A., 2010 Luxemburg Netherlands: Pat Leisure Sports, 7751 SK Dalen **Norway:** Flatanger Hytteutleie, 7770 Flatanger Poland: Fam. Kubatzki, 66111 Nowe-Kramsko Portugal: Prosom Consultores Técnicos Engenharia Ambiente Lda., 1300 Lissboa Romania: S.C. Safety Plus S.r.l., 735100 Husi Slovakia: Shiptech S.r.o., 90046 Most pri Bratislave Spain: Lunatus Comunicacion Audiovisual S.L., 28220 Majadahonda Switzerland: TEIZU GmbH. 3302 Moosseedorf

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