



Updown Habitable

Conception

Even under water; in short, a normal yacht that, if you will, can go underwater. The project seemed to want to annul the laws of physics, but physics has generously allowed us to make it happen.

Updown Habitable was initially conceived as a novelty aimed at the recreational boating industry and, more generally, to the world of tourism.

In emersion the displacement of water is similar to other boats, in more Updown can dive normally at a depth of thirty meters and also be calculated for greater depths.

The concept that has prevailed during the conception and design of **Updown Habitable**, was to extend the collective imagination that attaches to the submarine use in war or scientific.

A vehicle for modest cost and ease of use makes it possible for everyone to explore the underwater world, is an undoubted innovation in the nautical sector and some sort of new dimension to the horizons of popular liberties.

Updown Habitable is therefore a unique vessel for the possibility to emerge above the water more than three quarters of its hull, compared to conventional submarines that emerge in lower proportions.

The mentioned feature means that, once revealed, **Updown Habitable** behaves like a normal pleasure craft, with the consequent advantage of operating fast movements and especially with lower energy uses of conventional submarines. This is technically possible also because it consists of a hull of the type "ultra light displacement boat" or displacement; moreover, it is able to load and unload large quantities of water.

In full emersion, so without water on board, Updown Habitable weighs less than half of a conventional submarine of the same size; what makes it unique.

Habitability

Updown Habitable 20 feet (6 meters) boat is modest in size but full of toilet, double bed, two single bunks, a stove, a small wardrobe, a small table to the fore two wells, a reservoir for the ' drinking water, refrigerator, television and other amenities aimed at increasing the livability of the boat.

Updown Habitable 35 ft (10 meters) offers all the provisions of the Model 20 ft, but it is full of six regular beds and a substantial living.

One of the fundamental aspects of which were taken into account is the effect of "aquarium" that we wanted to get already from the moment you enter inside.

Each specimen has a large dome of almost a meter and a half in diameter polymethylmethacrylate formed monolithically with a thickness of 30 mm, which ensures a significant effect panoramic, in turn reinforced by rectangular portholes placed symmetrically in the sides of the hull.

It is appropriate to put attention on the awashability of the shower and water closet, which is an element of absolute novelty. The need to ship large quantities of water to make it workable diving, objectively creates the problem of finding habitable volumes within any suitable means immersion. Especially in the case of a vessel of small dimensions, a toilet compartment traditionally built, would inevitably reduced appreciably other habitable volumes. In the case of Updown 20, the toilet is located within the larger of the five tanks, which are intended to load water. In this way, the simple function of the toilet can be normally carried out at any time except during navigation under share that, as anticipated, involves the flooding of the room used for this use. In order to unavailability of toilet room during the dive, keep in mind that each model Updown is normally able to rise to the surface in a few seconds. With regard to privacy, unless it is for boats of considerable size, the toilet rooms are heavily penalized; Updown 20 consists of a local pond, toilet, entrance autonomous and completely isolated from the rest of the boat.

Unlike the specimens intended for industrial use, the ones made for recreational boating, are equipped with a full deck space offers a large cockpit. Make it comfortable habitability of the deck and the cockpit of a pleasure boat is fundamental, however, in the case of Updown, a cockpit traditionally conceived, would create great difficulties during scuba diving, due to the insurmountable resistance due to the large masses of water to move.

The spacious deck of each boat Updown is long and wide as the entire boat and back in the stern, a large seat horseshoe in turn supported by a roll-bar.

Both the roll-bar and the seat horseshoe supported by it, are constituted by airfoils that therefore oppose a very low running resistance in immersion.

It is thus able to solve the problem of habitability outside, getting also a nice structural element that provides additional elegance to the visual aspect.

Propulsion Updown is equipped with two engines. The first is a four-stroke combustion with diesel power, power based on the size, which allows a cruising speed of over 12 knots in the emergence and 6 at periscope. The autonomy of navigation assisted by the internal combustion engine is about twelve hours.

The other motor, also usable in emergence but dedicated to a silent underwater navigation, is a brushless electric motor in torque, fed at 48 or 72 volts DC and able to allow a speed of 4 knots in immersion. The autonomy of navigation assisted by the electric motor is about four hours; the two engines use the same propeller shaft.

Updown has Schnorchel, namely the extension of the intake and exhaust pipes, to navigate to periscope level using the internal combustion engine. The application of Schnorchel is made possible by passing the suction and discharge pipes within the structure of roll-bar is located in the aft area of the bridge.

Conduction In every moment of the design and implementation of Updown, was taken into full account every possible reference to security. Any emergency maneuver is practicable even manually, and then so much by independent sources of electrical energy, as other systems.

That said, each maneuver is part of a computer system and a software specially made for Updown.

You can set each parameter of navigation, especially underwater, previously and therefore, to establish the timing and dive height.

Regardless of the values set by the user from time to time, there are fixed limits that can't be changed and that are assigned by the manufacturer based on usage required when ordering.

The parameters to which it refers, concerning the times and the maximum odds of immersion.

The structure and the stabilization relative to the longitudinal axis so as to the cross, entrusted to the onboard computer that operates within a range set in advance.

Moving parts are the external rudder, tailplane or share ailerons and two stabilizers.

Each **Updown Habitable** is equipped with five armored tanks. Each tank, totally independent of the other, is equipped with two valves dual circuit for the storage and the ejection of the load of water. The tanks are arranged in the stern, bow, in the lower area called horizontal hull, to port and starboard.

Each tank is able to bring Updown surface.

Versatility of use

As stated in the opening, Updown Habitable has been designed to extend the concepts of sailing.

Subsequently, in the daily living of the market, there has been realized as a vehicle of this kind can be used for variety of uses; from recreational to scientific research, from inspections to news reports, the rescue filming streaming inspection of whatever is beneath the surface of the water line to anything else.

Updown Habitable can be built in sizes greater than 35 ft and be set up and customized according to customer requirements.

In addition to boaters, users can be: the Port Authorities, the Civil Defence Department, the Police, the Police, and all those entities or realities that need machines that can easily scour the depths of the seas, lakes and rivers and run inspections to installations immersed or keels of boats of any type.

One aspect that report in closing, but that does not deserve less consideration of others set our above, is the ability to take samples, of every type and lifting heavy or dangerous cargo.