

# ictineu 3

## Research submersible ICTINEU 3

## Innovation

The ICTINEU 3 incorporates several innovations that make it a cutting-edge new tool for underwater observation and work:

- Innovation in stainless-steel materials for an insuperable volume/weight ratio
- Incorporates for the first time composites in structures, including last generation materials
- First certified system of ion-lithium batteries for high energetic capacity
- Huge acrylic dome to withstand depths under 1000m
- Improvements in ergonomics and design in work class submersibles



## Main Facts

- Reduced weight for easy operation from most research vessels, < 6000 kg
- Reduced size for easy transportation to work place, fits in an open top container
- Passengers can go in/out from water surface
- High power capacity: able to work with thrusters, lights and all instruments and sensors simultaneously
- Facility and capacity to upload any instrument or sensor from the client
- Able to travel up to 20 miles underwater
- Huge field of view for photography and video recording
- Long time dives + comfort + high operability are possible

The ICTINEU 3 is a modern and highly competitive manned submersible, conceived as an extremely versatile tool, capable to be transformed and modified as newer technological solutions and equipment become available and suitable for a wide range of tasks, from oceanography to archaeology, industry works, filming and photography or even leisure.

The ICTINEU 3 submersible is designed to dive to a maximum depth of 1200 meters and host a crew of three people. It will be the 9<sup>th</sup> world's deepest submersible and the first to be equipped with a big acrylic window (1.5m diameter) under 1000m.

ICTINEU 3 will be launched under GL A5 classification.

## General Specifications

Operating depth	1200 m	Length	4800 mm
Weight in air	5300 kg	Beam	1950 mm
Cruising speed	1.5 knots	Height	3000 mm

Working autonomy: 10h  
Crew: 1 pilot, 2 observers  
Life support: 120 man hours  
Propulsion: 4 Stern + 4 Manoeuvring thrusters, 2kW e.  
Batteries: 42kWh , 150V, Li-Ion polymer

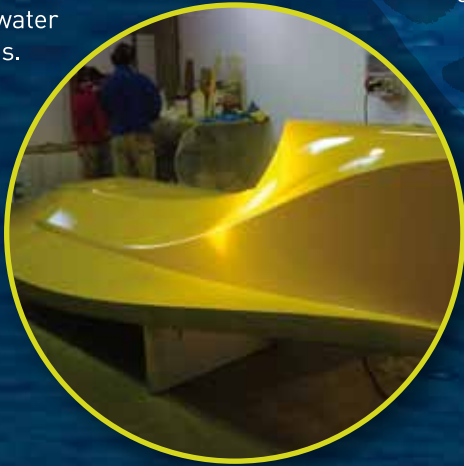


# ictineu

## SUBMARINS

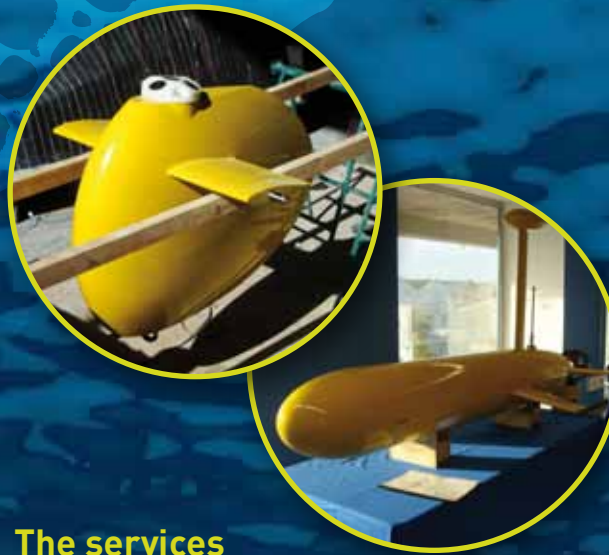
### The company

ICTINEU Submarins SL is a company founded in 2007 as a result of an ambitious project: creating an industry for manned submersibles manufacturing and pushing a new industrial sector in the country with a high added value: the underwater technology. The first project is the ICTINEU 3 that, by incorporating cutting-edge technologies and a high quality standards, proves the capacity of the company for a series production of new units as well as new research in marine technology and underwater applications.



### Company Experience

- Boat construction, extreme competition ship construction in composites
- Composite materials application (automotive, building construction, industry applications)
- Positioning and navigation systems, GNSS
- Underwater positioning and navigation
- Robotics, artificial vision, SLAM
- Power systems



### The services

The company can offer a wide range of services, ensuring high quality, absolute responsibility with the client, and many years of experience in marine technologies and navigation systems.

- Diving services with ICTINEU 3 (hours, days or campaigns), with 2 passengers and the capability to embed any instrumentation provided by the client
- Design and production of manned submersibles down to 1500m depth, adapted to client request, both for science and industrial use or devoted to yacht and leisure
- Project engineering in underwater technology
- FEM calculations for pressure vessels
- Special works in composite materials
- Structures and housings for AUV, buoys and other instruments or vehicles
- Autoclave testing facilities:
  - Oil vessel up to 250 atmospheres, 600mm long and 135mm diameter for electronics and small components.
  - Water vessel up to 220 atmospheres, 1500mm long and 595mm diameter.

### Company Facilities

- 450 m<sup>2</sup> workshop
- 4000 kg crane
- Oil autoclave up to 250 atmospheres
- Water autoclave up to 220 atmospheres
- 300 m<sup>2</sup> electronics laboratory



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