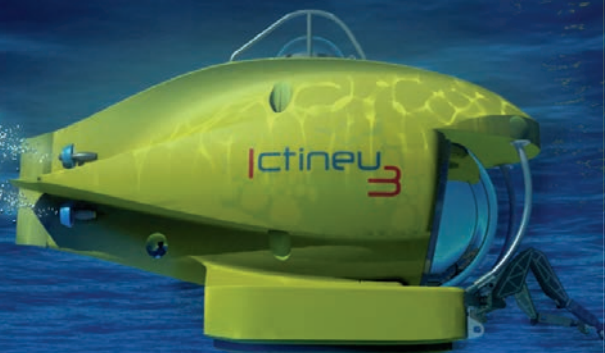


# Ictineu 3

## Research submersible ICTINEU 3



The ICTINEU 3 is a new generation manned submersible, with a powerful state-of-the-art battery package that can drive up to 20 miles underwater. This exceptional range is achieved through exacting hydrodynamics and vehicle efficiency making ICTINEU 3 a safe and excellent tool for underwater exploration, scientific research and underwater intervention.

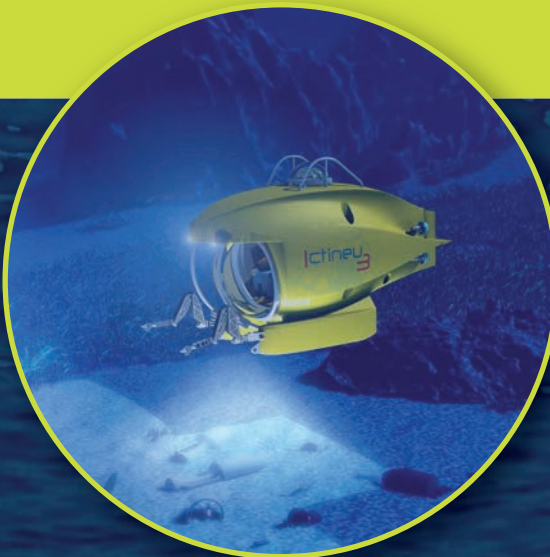
The ICTINEU 3 submersible is a 3-person vehicle rated to 1200m and it is among the top 10 deepest (active) submersibles in the world. It offers an unobstructed view of the seabed thanks to a big acrylic window 1.5m in diameter.

ICTINEU 3 will be launched under GL A5 classification.

## 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 and low maintenance
- Composites are used as structural material, including last generation and fire-proof materials
- First certified lithium-polymer battery system for high power and high energy capacity
- Huge acrylic dome to withstand depths under 1000m
- Improvements in ergonomics and design in work class submersibles



## 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, 2.5kW e.			
Batteries: 42kWh , 150V, Li-Ion polymer			

## Main Facts

- Reduced weight for easy operation from most research vessels, < 5300 kg
- Reduced size for easy transportation to diving place, fits in a 20 feet container
- Passengers can go in/out from water surface
- High power and high energy capacity: any mission can be performed with no limitation of energy regardless the instrumentation/lighting being used
- 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 dives + comfort + high operability + safety are possible





# Ictineu

## SUBMARINS

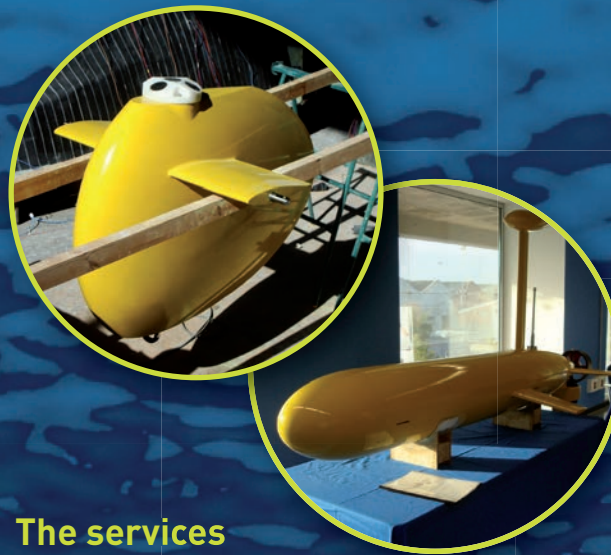
### The company

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 for new research in marine technology and underwater applications.



### Company Experience

- Ship building, extreme competition ship construction in composites
- Use of composite materials for automotive, marine and industry applications
- Positioning and navigation systems, GNSS
- Underwater positioning and navigation
- Power systems, lithium polymer cell applications



### 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: any mission profile with 2 passengers and the capability to embed any instrumentation provided by the client; tourist dives
- Design and production of manned submersibles down to 1500m depth, customized to client needs, 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, from design to prototype
- Hydrostatic testing facilities:
  - Oil filled autoclave, up to 250 atmospheres, 600mm long and 135mm diameter for electronics and small components.
  - Water filled autoclave, 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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