

Shift your adventure...



### **History**



Talleres Luis Piñeiro are a small family business located in Galicia, at northwest of Spain. The company was founded at 1934 as a forge shop, who, with effort and determination, has progressed in line with the local market, of marking marine character.

We has always guided by the passion for the mechanics, applied in the search for solutions to problems

that were arising in our scope, analyzing how and why. So emerges ECA system to the attemp to solve a problem suffered by fisherman from a nearby area rich in seafood but in a rocky and shallow draft zone:

- If they used outboard engines the boats lacked a hydraulic system to up the fishing gears or supplementary systems to act, having to install an auxiliary engine for the hydraulic system.
- With another propulsion systems they had a very serious problem in maintenance costs and repairs due to characteristics of the area.



### **ECA Development**

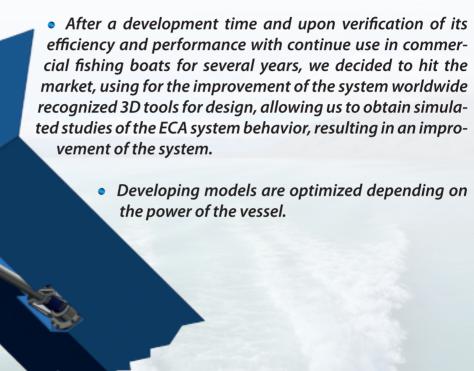
• Existing propulsion systems are not always suitable for all applications and scenarios at sea, either by rigidity, fragility or excessive cost of the system or its maintenance.



• The development of the articulated propeller shaft emerges, at the attempt to solve a problem that we saw, specially in the field of coastal commercial fishing, where fishermen needs a versatile system that allows them to combine, on a single system, the benefits of a traditional axis, focused at performance and economy at maintenance and the best features of a stern drive such as built in elevation and steering.



## **ECA Development**





## **ECA Description**

- Articulated shaft line / floating with the same features as a single axis.
- With hydraulic trim system and hydraulic steering incorporated.



- Allows free stranded.
- The main feature of the ECA system is that provides the same benefits as a traditional axis, adding two new features: elevation and steering incorporated.





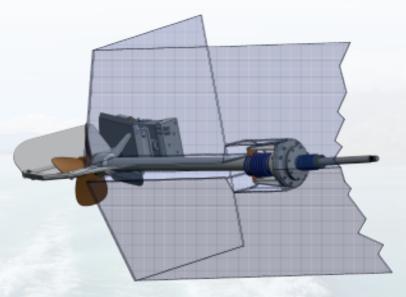
## Hydraulic elevation incorporated

- The elevation allows the navigation in shallow water or with obstacles, even at the seashore, and the easy release of objects that may engage in the propeller, like nets, bags or ropes without immersion in the sea.
- It also allows us to improve engine performance searching the optimum angle of elevation adjusting it according to the load of the engine.
- Allows normal navigation at shallow areas or with obstacles, even at shore.



## Hydraulic steering incorporated

- Including the rudder, the steering response is very fast both up ahead and astern.
- The maneuverability of the boat becomes improved and you can maneuver perfectly with the ECA system at any angle of elevation.
- The assembly of the ECA system is easy, fast and precise, once the positioning tunnel is molded into the hull.





### **Technical Characteristics**

• Built in stainless steel AISI 316L and marine bronze.



- Construction with constant velocity joints.
- Hydraulic steering and elevation systems.

- Quick and easy installation.
- Mold provided for installation.
- Several models based on desired power.





#### Mold

- The positioning mold is critical to the placement of the system, it gives us the reference for the engine position in the hull, and housing the ECA system inside.
- Once mounted is part of the vessel, so that, the consistence of the laminate has to be perfect.





### Head

- This part is fastened to the tunnel and is where the CV joint and the elevation joint are hosting.
- This part have two possibilities of input, inline or V drive gearbox. With V drive, the engine can be positioned close to the transom, over the mold.





### Middle

- This part consist of stern tube, shaft and protections.
- The protections avoid propeller damages and let the floating objects slipping from the bottom protecting the propeller.

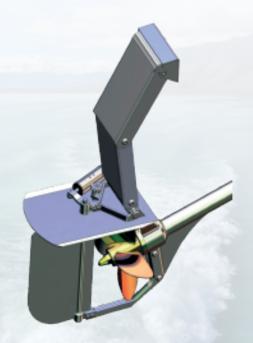




### Set rudder and elevation

• Composed by flap, rudder and elevation articulation.







# Mounting example with system up

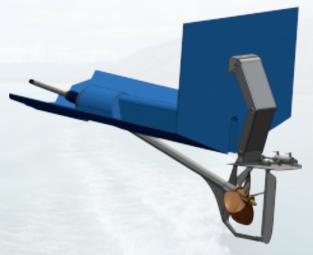






# Mounting example with system down







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