



Hybrid water taxi

An eco-sustainable transportation solution is urgently needed on the Venice Lagoon, and now a new hybrid boat paves the way for widespread adoption

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Transfluid has installed and delivered its HM560-12 hybrid system as a retrofit of an 'old style' limousine water taxi in the Municipality of Venice. It is the first hybrid boat of this type in the city. The system consists of an HM560 hybrid module equipped with a 12kW electric machine, fed by a battery bank of 10kWh, coupled with the FPT530 230 E marine diesel engine. This eco-sustainable solution was needed urgently on the Venice Lagoon.

Surfing in electric mode and producing minimum motion through the silent waters, it is a new way to experience the city while reducing noise, pollution and the wave motion.

Transfluid's hybrid systems have obtained DNV-GL type approval. Besides the taxi in Venice, Transfluid has worked on other transportation boats, including hybrid and fully electric systems. This is the future for cities with canals or rivers to tighten control of pollutant emissions in the air and water, and reduce wave motion and noise.

This hybrid system can be mounted both on new and existing boats. The module is installed between the internal combustion engine and the transmission system, with the electric machines, which are also produced by Transfluid, mounted parallel to the propulsion axis line. This can be achieved in tight spaces, in line with the SAE coupling standards used by engine and transmission manufacturers.



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Transfluid has successfully installed its systems on various types of pleasure craft and work boats in numerous European countries.

Adapt and survive

The Transfluid system enables eco-compatible navigation with two operating modes. One can exploit the electric machine to recharge the batteries in regeneration mode. In zero emissions mode, the electric motor is powered by a high-efficiency lithium battery bank (LiFePO₄), capable of powering the entire system, completely silently.

It is also possible to increase the autonomy with the aid of an onboard generator. With more power than the main diesel, it functions

1. Executives proudly stand aboard the first limousine hybrid water taxi in Venice

2. The Transfluid-developed system combines a 12kW e-machine, a 10kWh battery bank, and a diesel engine

as a range extender, which, even during electric navigation, can supply power to the propulsion batteries.

The Transfluid hybrid system has the flexibility to meet the needs of most yards operating in the leisure and work boating sector. The benefits of such a system are also applicable for working vessels, for loading and unloading operations, and passenger transportation, for example.

Synchronization of the two navigation modes leads to fuel savings across the overall route. It also enables sailing in protected areas – silently and without polluting – and staying at anchor without the engines running.

The components of the hybrid system are designed and built by the team at Transfluid and are used in various marine applications; thanks to this, all the system components are built in series. This offers a variety of benefits, including lower system costs due to economies of scale. +