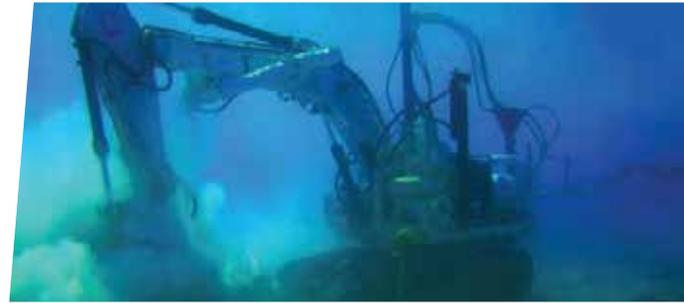




Case study

Coral reef rock cutting

GeoOcean



Scope of work

GeoOcean use James Fisher Prolec's pcX-Pro 3D guidance solution for subsea reef rock cutting in French Polynesia.

The submersible and full remotely operated excavator (pictured above) is yet another specialist machine operated by GeoOcean, a French Multinational dredging and marine construction company.

After a highly successful project with James Fisher Prolec in the past - a tailored 3D machine guidance package for use with its highly specialised scissor excavator 'MAX', GeoOcean decided to continue its partnership with James Fisher Prolec.

GeoOcean's requirement was to cut a trench into the coral reef located in the waters of an island in French Polynesia. This itself would have been no simple task, but in this instance the machine was required to also operate 25m below the water level. To add to this, damage to the coral reef had to be kept to a minimum.

In this case, James Fisher Prolec's task was not only provide a robust and rugged system designed to operate 25m underwater, but also to design 3D graphics of the machine itself, as well as the development of a complex 3D model of the rock cutting tool. More proof of James Fisher Prolec's ability to customise the system to the customer's exacting requirements.

Another challenge faced by GeoOcean was accurate positioning of its machine, 25m below the waterline. This was achieved by using an extended GPS mast setup, ensuring antennas were kept above water. As a second step the positioning signal of a highly accurate Gyro compass was also integrated into the software enable GeoOcean to operate in even deeper water.

The result was another successful integration of James Fisher Prolec expertise and unique customer demand. GeoOcean completed the job on time and to specification thanks to James Fisher Prolec's help.

Benefits delivered

- Highly accurate excavation and trenching
- Remote view and control of operations
- 100% up time regardless of turbulence
- Consistency of operation regardless of operator experience
- Compatibility with GNSS and gyro positioning
- The ability to compare 'as built' data to the design in real time alongside fully rendered 3D topography
- Accurate trenching - avoiding damage to the reef

Summary

James Fisher Prolec's pcX-Pro 3D machine guidance system with GPS and Gyro compass solution for subsea operations

Equipment provided

- pcX-Pro Machine guidance software
- Robust marine grade hardware
- Accurate positioning above and below waterline
- 11" Panasonic touchscreen display