



# FLATFISH

ADVANCED UNDERWATER DRONE  
UNLOCKING A REVOLUTIONARY APPROACH  
TO LIFE OF FIELD SERVICES



FLATFISH

# FLATFISH

## A REVOLUTIONARY DRONE FOR THE FUTURE OF SUBSEA INSPECTION

Saipem's commitment to sustainable technological development continues with its progress made in Subsea Robotics at Sonsub, the Centre of Excellence for underwater technologies and robotics. Such progress fosters Saipem constant search for competitive and cost-effective solutions: indeed, FlatFish, being part of the Hydrone program, is an advanced inspection drone conceived to monitor and maintain subsea infrastructures in an innovative manner.

The Hydrone development program aims at changing the paradigm of underwater inspections and interventions through a fleet of underwater drones and auxiliary infrastructures. The Saipem's FlatFish is the conjunction between the subsea robotics program of a leading energy company, started back in 2013 in Brazil, and the Saipem's Hydrone program, a visionary technological development which Saipem has launched in 2016. Based on a clear commonality of visions, since March 2018 Saipem has been working on the FlatFish project via an exclusive license granted to develop the FlatFish technology and qualify it for offshore commercial application.

FlatFish is now equipped with the most advanced sensing and monitoring devices enabling functionalities such as underwater pipeline and riser autonomous inspection, subsea IoT data harvesting, contactless monitoring of cathodic protection systems. The drone can be operated by a flying-hanging garage for launching/recovering or be permanently subsea resident for recharging and programming.

### KEY FEATURES

- 3,000 m water depth
- 2 knots - typical inspection speed
- 12 hrs endurance for typical inspection tasks
- Horizontal inspection range: up to 50 km in fully operational mode
- Fully autonomous and supervised operation modes
- Advanced navigation capabilities: hovering and tracking
- Multi-missions capability
- Capability to inspect the entire underwater domain: pipelines, structures and risers
- Topside and subsea residence deployment

### MULTI-MISSIONS CAPABILITY

- Interchangeable tooling skid (compatible with Hydrone-R mission payloads)
- CP survey contactless
- Acoustic survey
- Environmental monitoring
- Subsea configurable: visual survey, contactless CP, leak detection & environmental monitoring, data harvesting, 3D visual reconstruction

### DEPLOYMENT MODES

- Subsea permanent resident (subsea docking station)
- Surface resident (L&R from autonomous vessel, topside or FPSO)

FlatFish is an advanced underwater drone able to autonomously perform complex inspections of subsea assets in the entire underwater domain, thanks to its integrated artificial intelligence, advanced navigation features and payload-based modularity.

## DID YOU KNOW?

FLATFISH IS THE SECOND PRODUCT OF THE HYDRONE FAMILY WHICH INCLUDES THE HYDRONE-R (THE FIRST) AND HYDRONE-W (THE LAST). ALL DRONES SHARE THE SAME TECHNOLOGICAL BUILDING BLOCKS