



# HYDRONE-R

HYBRID ROV/AUV SYSTEM



# HYDRONE-R

## HYBRID ROV/AUV SYSTEM

Saipem's commitment to the deployment of sustainable solutions is exemplified by the Hydrone Platform, which has been developed by Sonsub, the Centre of Excellence for underwater technologies and robotics.

Sonsub constant search for competitive and cost-effective solutions has delivered the revolutionary Hydrone-R, a hybrid subsea drone designed to be controlled remotely in real-time (Remotely Operated Vehicle, ROV-mode) while embedding autonomous inspection capabilities (Autonomous Underwater Vehicle, AUV-mode).

Hydrone-R unlocks a change of paradigm for planning and execution of underwater inspections and light construction campaigns. A vessel-free execution scheme is enabled thanks to the capability to be at the hot point where immediate checks, diagnostics and, possibly, intervention are required. This minimizes asset downtime and unlocks a new frontier for less costly and more environmental-friendly supervision and operation of in-service subsea assets.

The Hydrone-R, selected by Equinor in October 2019 for the Njord-A project and awarded with the Spotlight on New Technology at the Offshore Technology Conference 2021, has been the first Underwater Intervention Drone (UID) in operations since June 2023. By working offshore Norway, it has established a world record for the offshore energy industry, with more than 5 months of uninterrupted dive.

### KEY FEATURES

- 3000 m water depth
- Operating mode (range): ROV (300 m) / Wireless ROV (50 m)/ AUV Modes (+ 20 km)
- Maximum dive duration: 6 months resident field proven (designed for 12 months)

#### MULTI-MISSIONS CAPABILITY

- Troubleshooting / Emergency intervention
- Periodic maintenance
- Acoustic / Visual survey
- Manipulation (valves, flying leads, other)
- Contactless CP
- Leak detection
- Environmental monitoring

#### DIMENSIONS

- Length: approx. 3,000 mm
- Width: approx. 1,800 mm
- Height: approx. 2,100 mm
- Through frame lifting: 715 kg
- Weight in air: 3,800 kg

#### TOOLING

*Manipulator/grabber*

- Manipulator: 1x 7F
- Grabber: 1x 5F

*Hydraulic*

- Power: 4.2 kW

#### SKIDS AND PAYLOADS

Multi tool SKID – Subsea interchangeable

- Power: 12 kW
- Suitable for electric and hydraulic tooling (2-off subsea reconfigurable stations)
- Typical tooling:
  - Torque Tool
  - Contactless Cathodic Protection measurement
  - Acoustic survey
  - Environmental survey and monitoring
  - Water jet
  - Other

#### TOP CLASS INSTRUMENTATION AND CONTROL, CONFIGURABLE

- Auto depth, auto-heading, auto-pitch/roll, station keeping, position trim
- Advanced automatic navigation features (i.e. go to point, path and grid, pipe following, obstacle detection and avoidance, exclusion zone management, etc.)

Ready for full remote control through on any communication link (Satellite, 4G-LTE, 5G, Radiolink)

