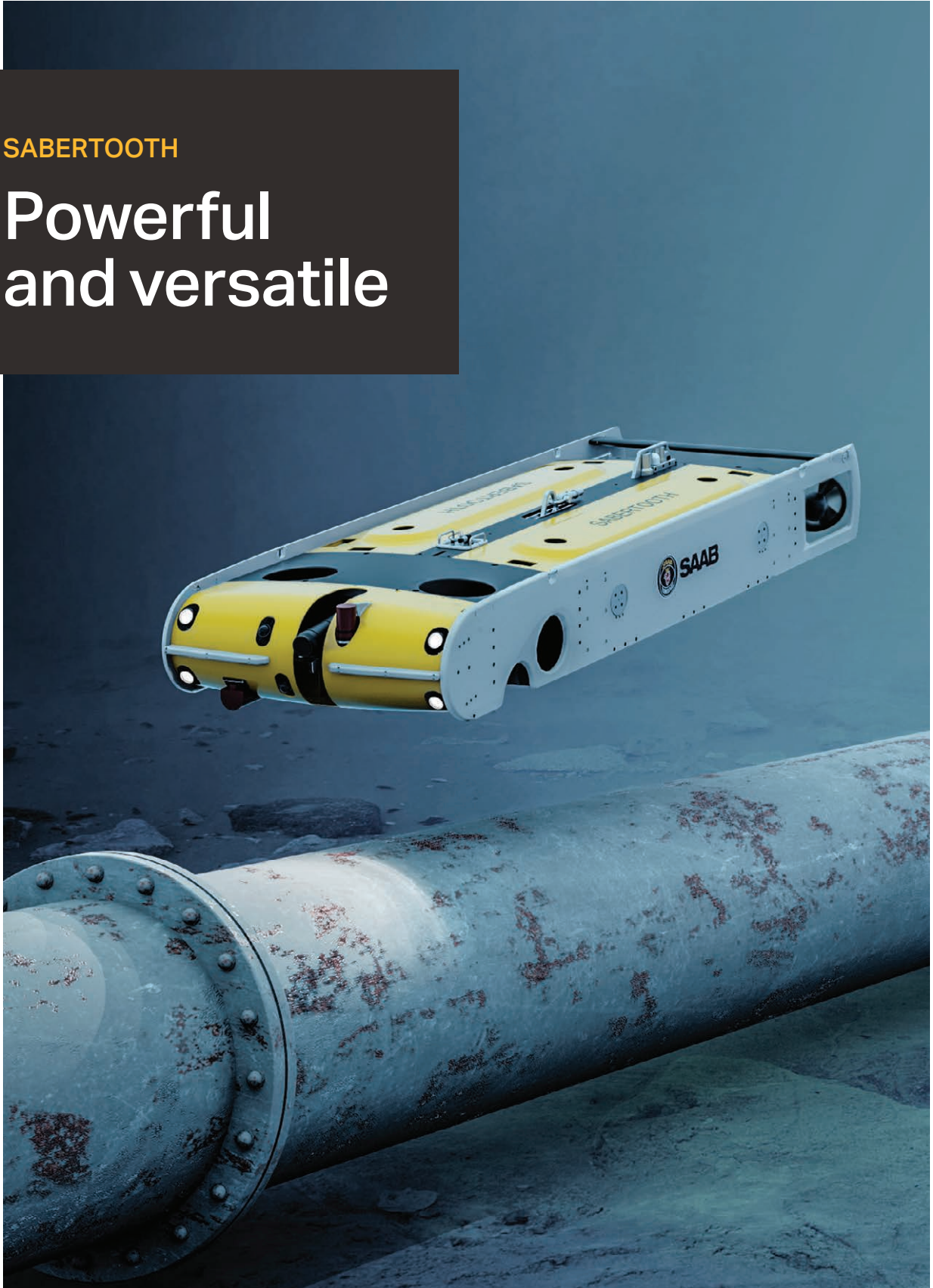




SAAB

SABERTOOTH

**Powerful
and versatile**



Extreme versatility

With deep water capability, long excursion range, advanced AUV functionality and a six degrees of freedom control system, Sabertooth is the perfect example of Saab's thinking edge in action.

Available in single and double hull versions, Sabertooth is a very powerful but lightweight platform for inspection, maintenance and repair (IMR). Its small size, tether-free operation and

manoeuvrability ensure easy and safe access inside and around complex structures, making it ideal for offshore survey work and autonomous IMR of subsea installations and tunnels.

Operational concept

Autonomous

This mode has behaviour-based architecture, supported by an inertial navigation system and Doppler velocity. Features include mission-planning software with the possibility for the customer-intelligent payload to take control, plus Saab's API means that customer/third-party software can act as a backseat driver.

Operator assisted

The vehicle is given step-by-step instructions from an operator over an optical through-water or acoustic communication link. Each step is then verified by video or sonar data and sent back via the through-water communication link.

Manual operation

The vehicle can be operated manually via fibre optic tether or an optical through-water communication link. This mode is typically used during the final approach to a docking node or during intervention. If the link is broken, a pre-programmed emergency routine is enabled.



System overview



The versatile Sabertooth is powered either by battery or via a tether. If used as a subsea resident system, the Sabertooth is housed at the docking unit where its batteries can be recharged. This unit allows for data to be uploaded to the surface and new instructions to be downloaded.

The vehicle can swim autonomously to the docking unit and remain there 24/7 for more than six months without maintenance, eliminating the cost of surface vessels.

This deep-water hovering hybrid AUV/ROV benefits from 360° manoeuvrability with six degrees of freedom, interfaces for sensors and auxiliary equipment. The vehicle also

utilises advanced autopilots: heading, depth, altitude, pitch and roll stabilisation, station keeping and vector transitions.

The Sabertooth has the capability for non-invasive self-diagnostics, and includes a fault-tolerant control system. Its remote internet interface can be used as a base for technical support if necessary.

Tooling packages can also be stored in the vicinity and used as required. In ROV mode, a wide range of winches and tethers are available.



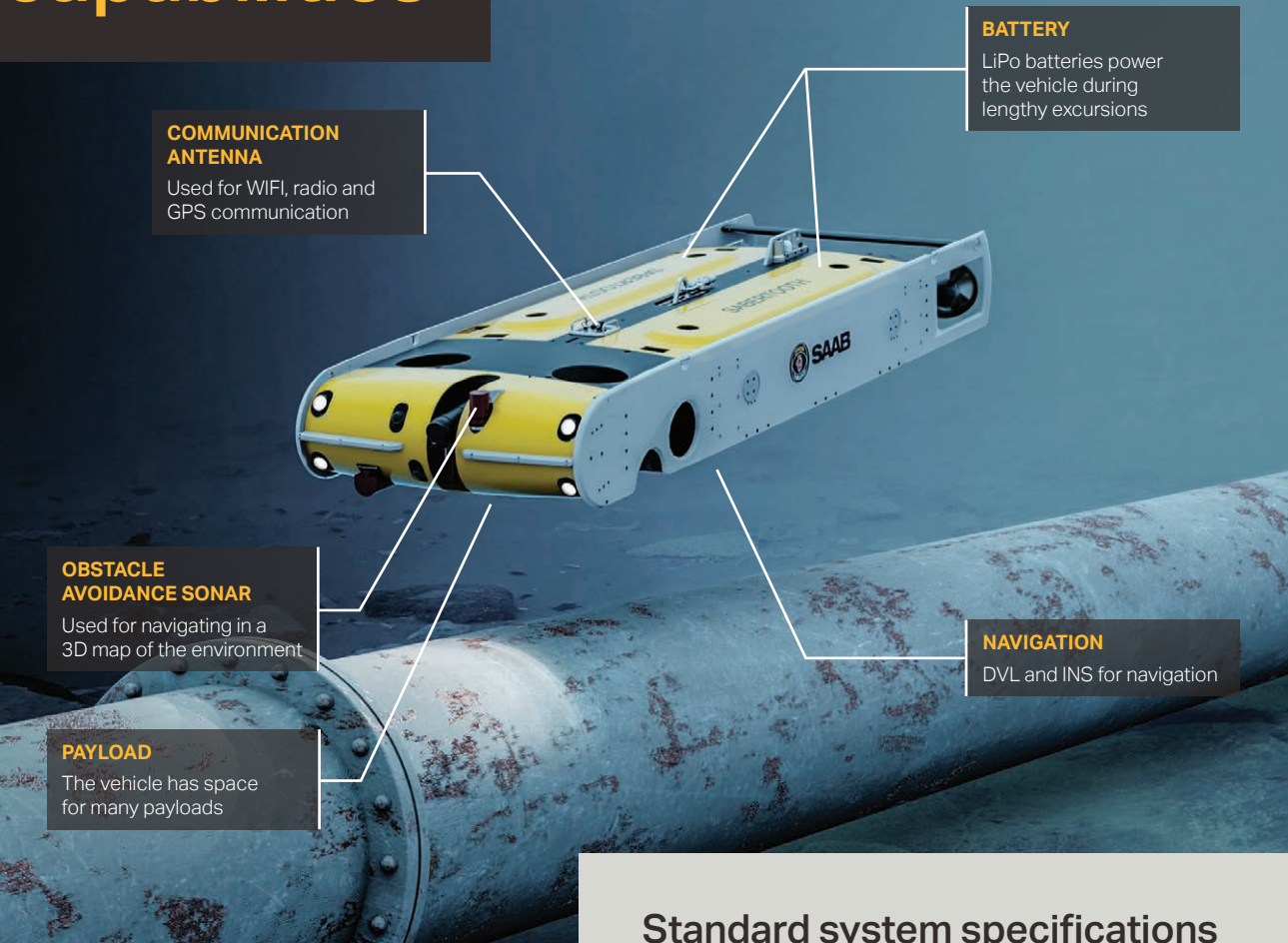
In-service support

Saab works closely with customers worldwide to secure their operational capabilities through our well-established and effective in-service support solutions. Our flexible and scalable range of offerings includes:

- Maintenance and repair
- Supply and logistics
- Operational and technical support
- Training
- Upgrades and modifications
- Obsolescence management



Multi-role capabilities



COMMUNICATION ANTENNA

Used for WIFI, radio and GPS communication

BATTERY

LiPo batteries power the vehicle during lengthy excursions

OBSTACLE AVOIDANCE SONAR

Used for navigating in a 3D map of the environment

PAYLOAD

The vehicle has space for many payloads

NAVIGATION

DVL and INS for navigation

Standard system specifications

	Single hull	Double hull
Depth rating	1,200 msw	3,000 msw
Dimensions	3.6 x 0.66 x 0.45 m	4 x 1.35 x 0.67 m
Launch weight	650 kg, max. 800 kg	1,300 kg, max. 2,000 kg
Interfaces	Cameras, sonars, HV tooling/motor	Cameras, sonars, HV tooling/motor
Auto functions	6 DOF, heading, depth, altitude	6 DOF, heading, depth, altitude
Forward speed	5 knots	4 knots
Battery capacity	10 kWh	30 kWh



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