

# ROBUST AND RELIABLE

## MEET THE GORILLA ROV



Copenhagen Subsea has launched a new powerful Remotely Operated Vehicle (ROV), specifically developed for the tough conditions in the offshore industry.

The ROV is based on Copenhagen Subsea's rim-driven thruster technology and is robust and reliable in challenging environments – qualities which inspired us to name it the Gorilla.

Reliability has been first and foremost throughout the design and development of the Gorilla. By basing the ROV on industrial components, we ensure the utmost operational reliability, allowing our customers to execute their tasks on time, to budget and safely, with no need for divers in the water.

### Easy to operate

The Gorilla is equipped as standard with an intelligent Dynamic Positioning (DP) system, enabling automatic control of position, depth, altitude, heading, pitch and roll.

A lack of thrusters is a common problem in conventional ROV design, which makes it impossible to control the pitch and roll of the vehicle and thus hard for the operator to keep it stable during operations. Even weak currents can cause these ROVs to tilt and the operator to lose control of the vehicle, potentially leading even to the abandonment of the mission and recovery of the ROV.

By contrast, the Gorilla's state-of-the-art DP system makes it easy to operate the vehicle even in low

visibility and strong currents. This is based on an advanced sensor system, which delivers input to the DP system to constantly adjust output of the ROV's eight thrusters in a fly-by-wire system to keep it stable in the water. The Gorilla can sense the seafloor from up to 70 meters above, enabling the DP system to keep it in the required position, even should the operator take hands off the controls.

This solves another common problem during launch of conventional ROVs, when the current can quickly push it away from the vessel, leaving the operator disoriented and without knowledge of its exact location or where to steer to reach its destination. This can often lead to an abandoned mission, necessitating a second attempt or a wait for conditions to improve.

Instead, the Gorilla will use its DP system to instantly adjust the output of its eight thrusters to maintain position relative to the seabed, meaning the operator can easily steer to the designated destination.

### Reliability and strength

Like its namesake, the Gorilla is strong – our ROV can carry up to 70 kg and has an easy to understand payload interface with a power supply and separate fiber cable connection, dedicated to the customer-specific requirement. ►

## IDEALLY SUITED FOR COMPLETING ANY TASK IN TOUGH OFFSHORE CONDITIONS



The electrical system of the Gorilla ROV is based on industrial hardware from the leading Japanese industrial electronics company OMRON. This means we use only industrial standard hardware components which are available commercially – unlike conventional ROV systems which are often based on proprietary electronic components developed inhouse. This is a critical differentiating factor in the reliability of the Gorilla: hardware developed and produced inhouse, in series of only 20-50 items, is simply not of sufficient scale to achieve the required level of endurance and reliability for offshore use.

Industrial hardware components are cheaper, more reliable and easier to maintain as they are produced in series of hundreds of thousands and deployed worldwide across multiple industries. Such standard components are readily available off-the-shelf anywhere in the world and with significantly shorter delivery times for spare parts, compared to regular waits of 12 weeks or more for proprietary parts from conventional ROV manufacturers.

Customers will have access to all electric documentation in the form of wiring diagrams, meaning they can service and maintain the vehicle on their own, as well as a full

component list so they can source all parts directly. It means an operating company can simply change the Gorilla's standard spare parts itself.

### Executing tasks on time, to budget and safely

These robust industrial components are generally larger, but this means they have the required dimensions to perform reliably in extreme offshore conditions with extended temperature range. These parts also have the capacity to handle overload currents during acceleration and deceleration and fast shifts of rotational direction. These elements are crucial to keep an ROV stable in challenging offshore conditions.

### Ideally suited for any task

In short, the Gorilla is tough and strong, works reliably in challenging conditions, is simple to maintain with easy access spare parts and is easily controlled thanks to Copenhagen Subsea's thruster technology.

This unique combination, of exceptional reliability and robustness with maneuverability and power, makes the Gorilla ideally suited for completing any task in tough offshore conditions. On time, to budget and safely. ■

### 70 meters

The Gorilla can sense the seafloor from up to 70 meters above, enabling its Dynamic Positioning system to keep it in the required position