

# Mecanum Crawler Inspection Tool

Complex weld inspections made easy



## Key features

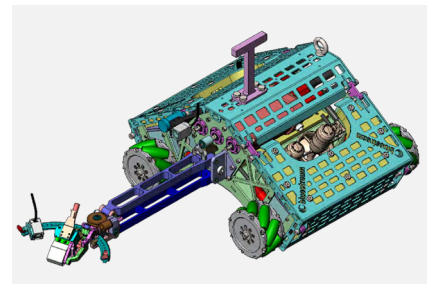
- Excellent stability on the structure
- Reduces time spent offshore and associated costs
- Increased manoeuvrability
- Compact size

Mecanum Crawler is a specialised tool primarily designed to perform complex subsea weld inspections.

**The tool adheres to the structure by creating an under pressure through the use of four thrusters. This ensures excellent stability on the structure in any orientation. It also allows for operations on members which require less cleaning than the previous generation tool which reduces the duration offshore and thus saves costs.**

The Mecanum Crawler, as the name might suggest, utilises mecanum wheels. These wheels make it possible to drive in any direction, which greatly increases the manoeuvrability. Because of the compact dimensions of the tool and reduced weight of the tool it is easy for the operator to position it and it can access more complicated geometry than before.

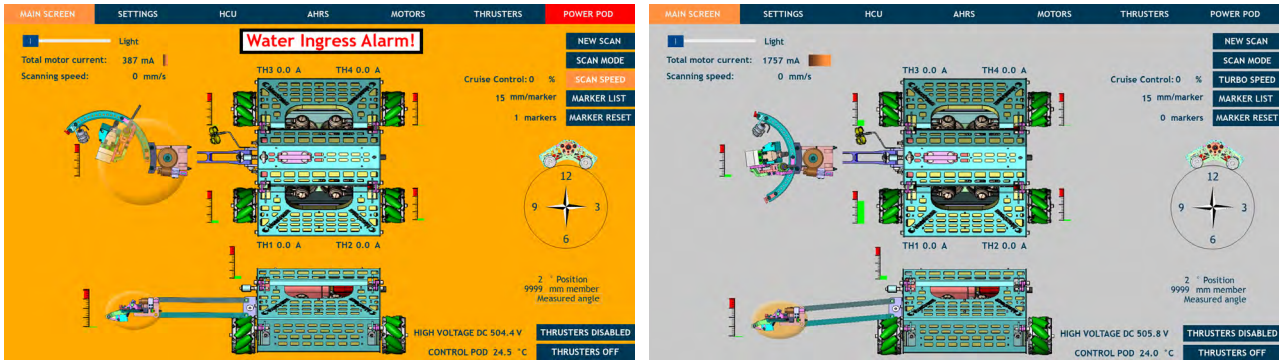
The tool is specifically designed to perform alternating current field measurement (ACFM) weld inspections, but it is also capable of carrying other sensors such as UT probes and cameras. The OEG team are always open to discussing alternative setups and sensors to find a solution to the need at hand.



## Software and HMI

The operator controls the tool through the human machine interface (HMI). The HMI displays all joint positions and the software accurately calculates the distance that the probe has travelled. Both the software and HMI have been developed in house.

The Mecanum Crawler is equipped with an attitude and heading reference system (AHRS) which precisely determines the location of the tool. In case of a vertical member, the position is calculated in a mathematical model.



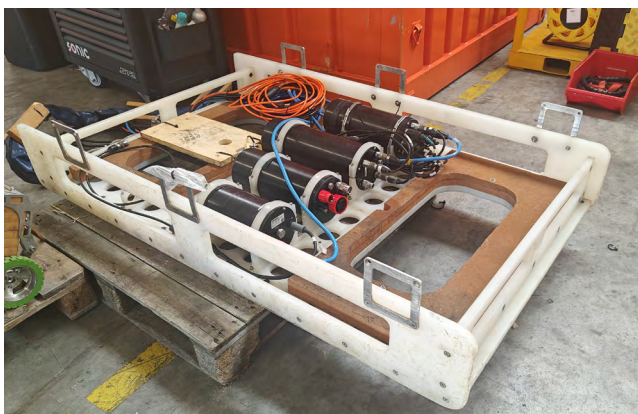
## Launch and Recovery

To safely launch and recover the Mecanum Crawler, even in rougher seas, a specific platform is designed and built to accommodate a stable entry and recovery through the splash zone.

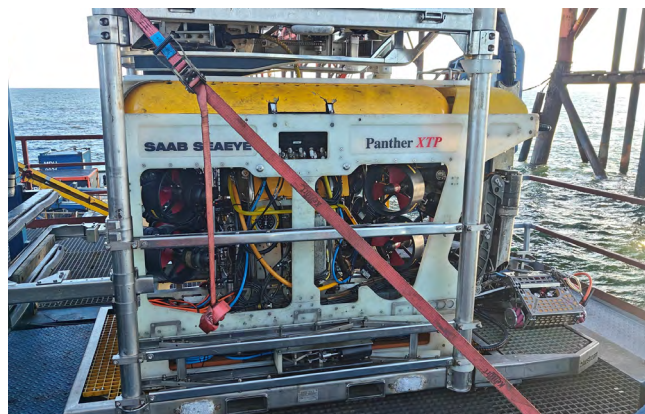
This platform fits on all of OEG's Saab Seaeye TMS-08 systems.

The Mecanum Crawler inspection tool consists of the following parts:

- 2x Mecanum Crawler (1 spare)
- Dedicated skid with power pod and data pod depending on the sensor
- Five metre umbilical between Mecanum Crawler and ROV
- Topside control system, which provides a graphical interface to the operator and a gamepad controller to operate Mecanum Crawler



Dedicated skid: houses the power POD, ACFM POD and cable overlength. Raises the ROV for the 4F to grab onto the crawler.



One of OEG's Saab Seaeye TMS-08 systems equipped with the dedicated platform.

# Specifications

## General Information

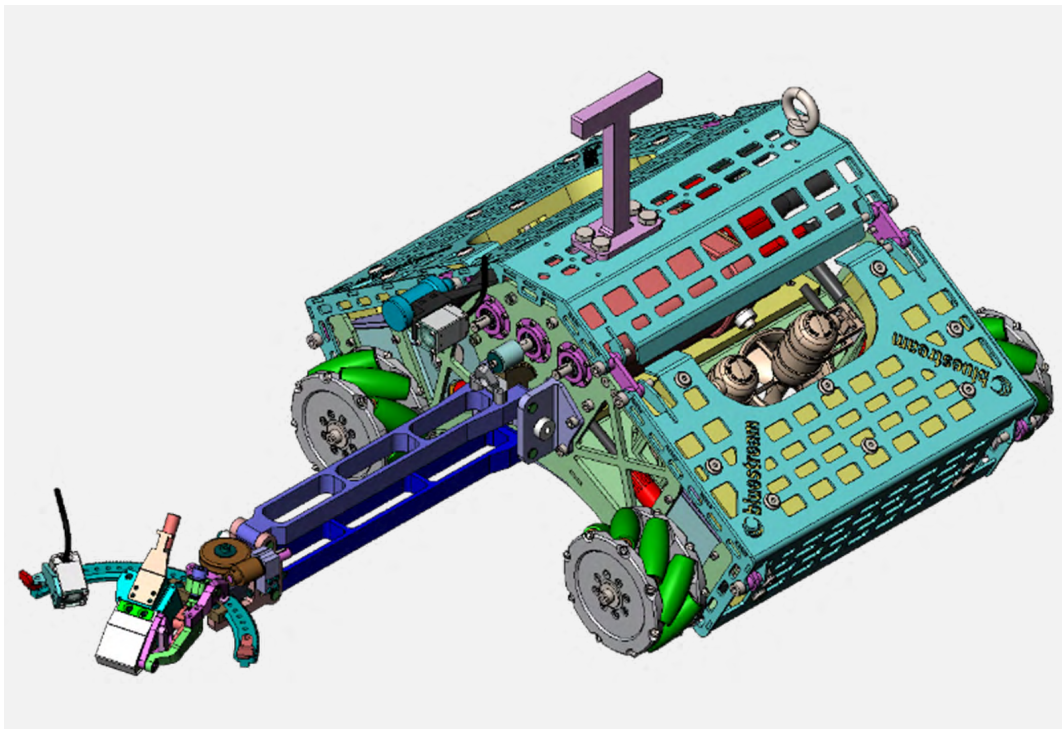
<b>Tool:</b>	Mecanum Crawler
<b>Depth Rating:</b>	200 metres
<b>Length:</b>	950 mm
<b>Width:</b>	580 mm
<b>Height:</b>	470 mm
<b>Reach Probe:</b>	450 mm
<b>Weight in Air:</b>	42 Kg
<b>Weight in Water:</b>	16 Kg
<b>Diameter Range:</b>	12 3/4" to flat
<b>Launched from:</b>	Seaeye Panther XT Plus

## Power and Control

<b>Thrusters:</b>	4 x T080
<b>Electrical:</b>	500VDC@ 4A & 24VDC @ 5A
<b>Communication:</b>	Ethernet 10 / 100 base-T
<b>Camera:</b>	2 x SD camera (directly to ROV camera port)

## Power and Control Topside System

<b>Electrical:</b>	230 VAC
<b>Communication:</b>	Ethernet 10 / 100 base-T to Mecanum Crawler Ethernet cable to laptop / PC for graphical interface RS232 serial cable output for encoder signal



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