

FLOORMAPX

MFL Array Tank Bottom Scanner



The world-leading multi-
technology tank inspection
solution

FLOORMAP®X: 10TH GENERATION OF SETTING THE STANDARD

The revolutionized Silverwing FloormapX delivers unparalleled improvements to tank bottom inspection resolution, coverage, and efficiency.

Multi-technology Solution for Optimal PoD

MFL Array: 64 channel, 128 multi-orientated MFL sensors, configured to produce the highest resolution imaging and market leading Probability of Detection (PoD). On its own, MFL cannot differentiate if the corrosion is top side or bottom side of the tank shell.

STARS: Our patented technology enables the FloormapX to differentiate between the top side and bottom side corrosion and report them separately. STARS also generates detailed top surface image profiles which contribute vital tank integrity information.

More Power

The smartMAGNET design, inclusive of the most powerful rare-earth magnets, injects up to 30% more magnet flux into the inspection surface compared to previous models. This allows the FloormapX to detect smaller defects and for the first time inspect tank bottoms up to 20 mm (3/4 in) thick with a high sensitivity. The magnets can also be controlled and set to an 'off' condition for easier, safer handling, cleaning and transportation.

Maximum Coverage

Precision active steering facilitates the inspection of the critical zone to within 12mm (1/2 in) of the shell wall ensuring the FloormapX maximizes coverage in the most important areas. A reduced profile and ability to tilt the handle also allows for increased coverage under pipework, allowing for a more comprehensive inspection.

Features:

Precision active steering: for fast, high-quality curved scans in the critical zone. It drastically reduces dead zones by placing sensors where they are needed most, within 12 mm of the tank shell. Comes with the capability to return to straight line driving at the simple push of a button.

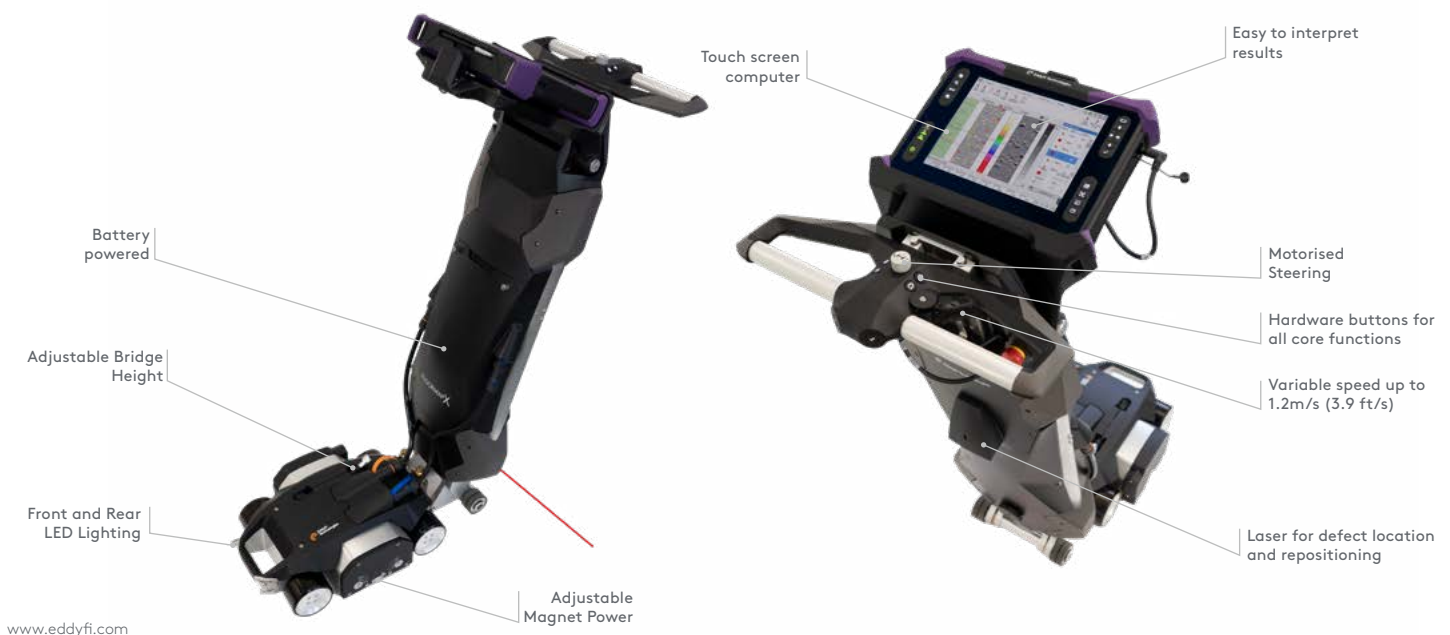
Interactive laser guide: marking the floor while you map is now fast and easy, thanks to laser-assisted defect location. The laser line is simulated live in the C-scan, allowing to correlate the physical location of tank floor defects with C-scan indications.

SmartMAGNET™: variable automated magnetic flux strength for optimized inspection performance depending on plate thickness. Besides, literally turn off powerful rare earth permanent magnets for easier storage and shipping, and safer handling.

Adjustable bridge height: reach maximum sensitivity where conditions allow, and easily raise the bridge to scan even in the most challenging conditions, such as undulated plates, repair plates and lap welds or when surface preparation is not ideal.

Onboard powerful lighting: front dimmable, focalized LEDs, with diffusing lens and rear LEDs. Based on chip-on-board technology providing high and uniform intensity, inline with API recommendations for visual inspection, to perfectly highlight product-side pitting and scan obstacles.

Easy-break™: optimized design for intuitive and ergonomic breaking of the magnets by operator.



CURVED SCAN: GREATER COVERAGE WHERE IT COUNTS.

The Floormap®X supports multiple scan modes and the capacity to map the annular plate, including the critical zone. Customizable reporting options to suit EEMUA 159 and API653 recommendations.

Inspection Flexibility with 3 Scanning Modes

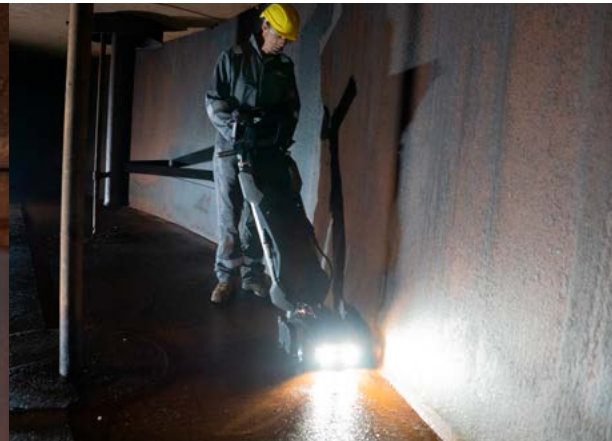
Mapping: A comprehensive inspection with full auditable data sets. Interrogate inspection data while in the tank or use the dedicated desktop SIMS PRO analysis and reporting software. During a scan, the operator can see the live data for both top and bottom defects.

Freescan: A simple, fast detection mode leveraging all of the underlying technology for the best possible result. The quickest way to locate corrosion. Scan in any orientation, with no need to measure plates.

Pause on defect: A new feature built into both mapping and Freescan modes. Allows the scanner to stop during a scan for defect mark-up or prove-up. Continue the scan without missing a step; the data will be seamless.

Benefits:

- **Critical zone inspection** with motorized curved scans
- **High-resolution** for accurate defect sizing
- **Maximum coverage** with annular plate mapping
- **Multi-technology** for top and bottom defect discrimination
- **Flexible scanning**, one scanner with three scan modes
- **Inspect thicker plates** up to 20 mm thick with a 30% increase of magnetic power
- **10% reporting thresholds**, increase inspection intervals
- **EEMUA 159 and AP I653 compliance**



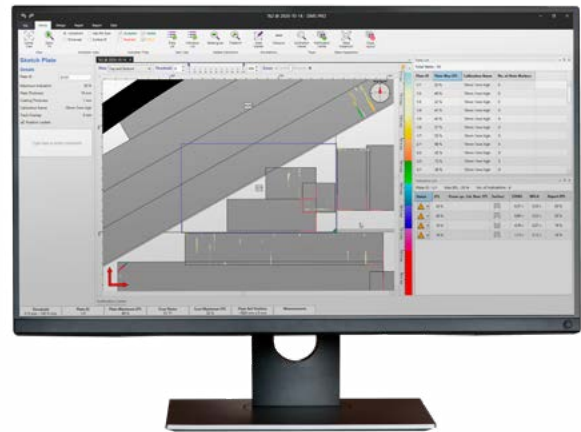
SIMS PRO: Reporting, and more

SIMS PRO has been developed with customer feedback and engagement to provide a reporting solution that adheres to the modern inspection demands including those outlined in EEMUA 159 and API 653.

Seamlessly integrating with the FloormapX, SIMS PRO automatically displays the inspection data in an intuitive and immersive manner to provide a clear condition image of the tank bottom which is essential for devising optimal maintenance and repair strategies.

The FloormapX system combines seamlessly with SIMS PRO software suite to deliver detailed, high-quality inspection reports in the shortest possible timeframe.

more information



FLOORMAP TECHNICAL SPECIFICATION

Principle of operation	Magnetic Flux Leakage & Magnetic Field Reluctance (STARS)
Numbers of sensors/channels	256 Hall Effect sensors, 64 channels
Top and bottom discrimination	Yes, using STARS technology
Test through coatings	Yes, if non magnetic
Speed	Variable from 500 mm/sec to 1 m/sec (19.7 in/sec to (3.28 ft/sec)
Scan width	300 mm (12 in)
Scan coverage	up to 263 m ² /h (2831 ft ² /h)
Positional accuracy	± 0.04% (± 3 mm over 8 metres) (± 3/32 in over 26 ft)
Method of propulsion	DC motor, anti-static drive wheels /or push pull
Dimensions (W x H x D)	510 x 980.5 x 690 mm (20 x 27.1 x 38.7 in)
Weight	57.5 kg (126 lbs)
Minimum man-way size	500 mm (20 in)
Number of transit case	2
Power requirements	28.8V 9Ah Ni MH
Batteries	Supplied with 4 batteries and 4 chargers for continuous use
Typical battery operational time	Up to 4 hours
Operating temperature	-30°C to 55°C (-22°F to 131°F)
Storage temperature	-35°C to 75°C (-31°F to 167°F)
Humidity	10 - 95% RH
Real time analysis	Defect size, x/Y position, plate view, top/bottom, MFL, MFLi, STARS
Training	6 hours online

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