

# Magg™ with ACFM®

Remote Visual Inspection and ACFM for Crack Assessment



# GOING THE DISTANCE FOR WELD INSPECTION

The Magg™ with ACFM® probe enables crack detection of critical components in hard-to-reach areas most efficiently, without jeopardizing the operator's safety.

## Alternating Current Field Measurement (ACFM) and Remote Visual Inspection (RVI)

ACFM technology has developed a solid reputation for accurately detecting and sizing surface-breaking cracks through paint and coatings.

ACFM is a rugged, tolerant NDT technique ideal for as-is inspection of coated structures, rough welds, and complex geometries. Achieving quantitative assessment of cracking with a High Probability of Detection (POD) is possible even in the most challenging conditions. When inspecting for cracks that often develop in high rising structural steels, ACFM is the perfect NDT technique.

The ACFM package allows for surface-breaking crack detection in addition to visual inspection up to a distance of 50m (164ft), making the Magg a unique and versatile inspection solution.

## Ultimate Magnetic Crawler with intuitive controls for easy operation

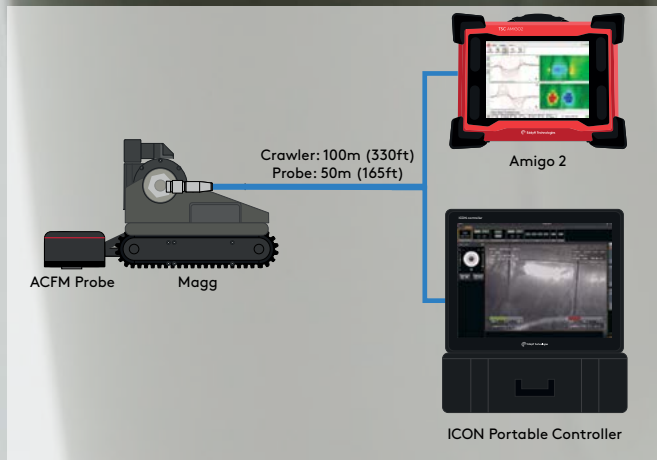
The Magg is a proven and reliable remote inspection crawler system designed to withstand harsh conditions and industrial environments.

With its industry-leading tracks, the Magg can quickly and easily navigate critical restricted access areas, whether the surface is clean or close to unpracticable. The unique combination of raw power, agility, and magnetic downforce allows the Magg to accomplish inspections that most wheeled vehicles and crawlers could not.

Any owner or service provider required to perform ACFM or RVI in confined spaces with limited access needs to add the Magg as an essential part of their NDT toolkit.

### Applications

- Storage tanks
- Pressure vessels
- Confined space
- Marine vessels
- Offshore platforms
- Large diameter pipelines
- Water tower
- Wind turbine



# MAKING THE MOST OUT OF YOUR EQUIPMENT

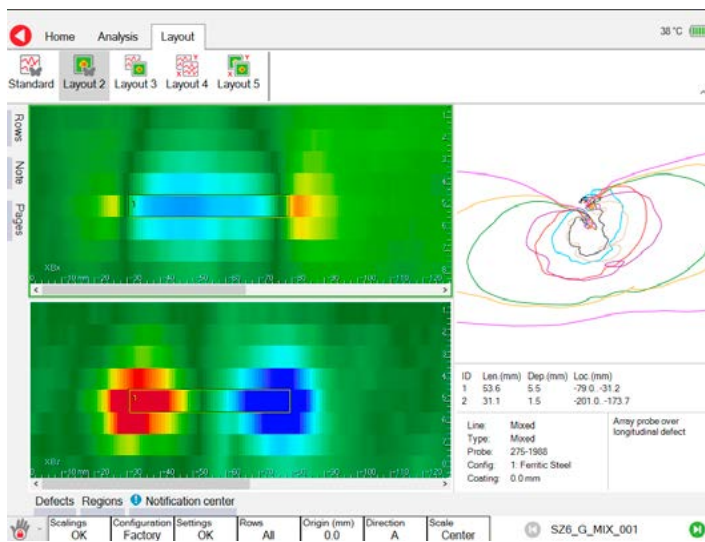
Combining field-proven solutions to overcome the most challenging applications.

## ACFM® probes

Alternating current field measurement (ACFM) is an electromagnetic inspection technique that detects and sizes surface-breaking cracks. The presence of a crack disturbs the electromagnetic field. This disturbance is instantaneously processed using advanced mathematical equations and displayed to the operator as quantitative, easy-to-understand information.

Accurate defect sizing and data recording are major benefits compared to other NDT methods. With ACFM's lower cleaning requirements and fewer false calls, inspections are significantly faster, saving customers money.

The Sensu2 compliant probe in this kit is ideal for inspecting butt or lap welds with raised profile weld caps.



## Amigo 2 instrument

Amigo 2 is a touch screen self-contained unit incorporating electronics and storage in one rugged enclosure. The multi-touch interface and quick access buttons offer highly intuitive access to all software functions.

Advanced signal processing ensures quality data can be interpreted as it is collected, making for rapid and accurate decisions. An incredible signal-to-noise ratio (SNR) increases the detectability of small defects even through thicker coatings, all at a fast scan rate.

## Rugged inspection camera

The fully integrated HD continuous tilt camera allows incredible details and clarity. Whether you're close, far, underwater, or in a dark tank, the image will provide you with an astounding amount of detail.

The ICON™ software records all the RVI data. Operators can easily take a snapshot of any areas of interest and then correlate it with the sensor data collected from the vehicle-mounted ACFM array probe.

The Magg comes with auxiliary lighting, lasers, 10x optical zoom, and much more. From top to bottom, the system has been uniquely optimized to allow a clear image streamed in a matter of milliseconds, allowing real-time decision-making.



## Robotic NDT solutions

Eddyfi Technologies offers a range of standard, off-the-shelf, proven robotic NDT solutions to inspect critical components in difficult to reach locations or confined spaces, reducing the risks to inspection personnel.

The Magg was built around a multi-mission modular approach that enables the delivery of multiple NDT techniques on top of general visual inspection, including Ultrasonics (UT), alternating current field measurement (ACFM), and more.

Talk to our experts to discuss which robotic crawler is best suited for your application.

# SPECIFICATIONS

## WHATS INCLUDED

Crawler	Magg™ 310 Enabled
Crawler controller	ICON controller (IPC) with ICON software
Tether/Cable length	Crawler: 100m (330ft)/Probe: 50m (165ft)
ACFM instrument	Amigo 2 with Assist software
ACFM probe	Sensu2 Compliant Array

## MAGG 310

Dimensions (W x H x D)	310 x 295 x 200mm (12.2 x 11.6 x 7.9in)
Weight/Vertical payload (tether + load)	10.9kg (24lb)/14kg (31lb)*
Maximum scan speed	3.6m (11.8ft) per minute
Tether length	100m (330ft)
Depth rating	60m (without the probe)
Camera	160° pan, FHD, 10x opt. zoom, 12x dig. zoom
Lighting	LED auxiliary lighting
Mounting	Universal actuator

## ICON PORTABLE CONTROLLER

Dimensions (W x H x D)	620 x 492 x 223mm (24.4 x 19.4 x 8.78in)
Weight	24kg (53lbs)
Operating power	Input: 100-240VAC, 50/60Hz Output: 70VDC, 450W Max
Computer	i7-8650U, 16Gb DDR4+2666, 500Gb SSD
I/O	1x USB 3.0 1x USB 2.0 Gigabit Ethernet 1x HDMI auxiliary video and RS485 1x Tether connector
Display	17,3" touchscreen FHD, 1000 nits
Position	Track mount encoder
Control	Remote Controller Mouse/Keyboard

\*Actual payload is affected by surface condition and magnetic property of the surface

## ACFM PROBE

Type	Sensu2 Compliant Array (8 rows)
Coverage	Up to 45mm (1.75in)
Vertical stroke	Independent, up to 12mm (0.47in) per module
Maximum cable length	50m (165ft)
IP rating	Designed for IP65

## AMIGO2

Dimensions (W x H x D)	355 x 288 x 127mm (14.0 x 11.3 x 5.0in)	
Weight (with battery)	6.6 kg (14.5 lb)	
Batteries	Type	Li-ion, rechargeable, DOT compliant
	Typical life	6-8 hours
Display	26.4 cm (10.4 in) Non-reflective (AR coating) Anti-fingerprint (oleophobic coating) 3 mm (1/8 in), chemically strengthened glass Optically bonded LCD and touchscreen Passive backlight enhancement	
IP rating	Designed for IP65	
Storage	SSD, 128 GB	
Drop-test	According to MIL-STD-810G	

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