

# Magg™ with Sharck™

Remote Visual Inspection (RVI) and Tangential Eddy Current Array  
(TECA) for Weld Assessment



# GOING THE DISTANCE FOR WELD INSPECTION

The Magg™ with Sharck TECA™ probe enables crack detection and sizing of critical carbon steel welds in hard-to-reach areas most efficiently, without jeopardizing the operator's safety.

## Tangential Eddy Current Array (TECA) and Remote Visual Inspection (RVI)

Based on the Tangential Eddy Current Array (TECA™) technology, Sharck BW is optimized to detect and characterize fatigue cracks in butt welds.

It can detect cracks, measure their length, and size them precisely up to a depth of 7 mm (0.28 in). This is achieved without removing paint or protective coatings, unlike more conventional techniques. Combined with the Magg™ crawler, it is now possible to inspect hard-to-reach areas without erecting scaffoldings or exposing rope access technicians to unnecessary hazards.

The innovative design of the patented Sharck™ probes can address the inspection needs of several industries relying heavily on carbon steel, such as the wind power, and structural industries.

## 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 butt weld inspection 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
- Pipelines
- Water Towers
- Wind Turbines
- Confined Spaces



# MAKING THE MOST OUT OF YOUR EQUIPMENT

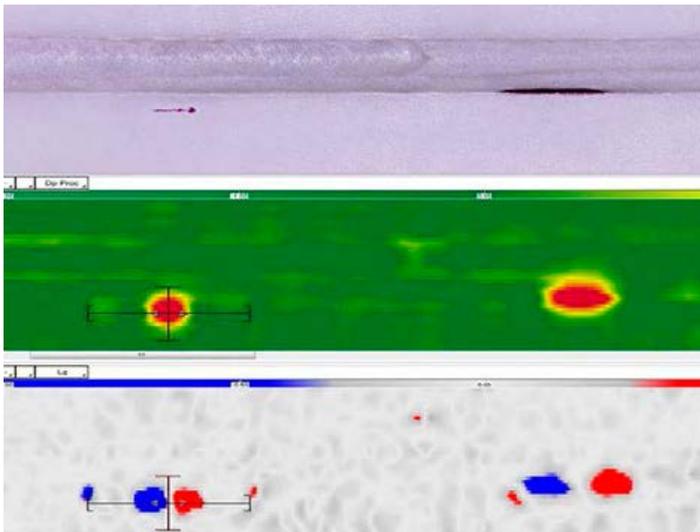
Combining field-proven solutions to overcome the most challenging applications.

## Faster inspections of butt welds

With its 22 spring-loaded ceramic sensors covering a total scan width of 53 mm (2.1 in), the Sharck™ probe can scan flat or curved surfaces and complete a full butt welds inspection, including the cap, toe, and heat-affected zone in one pass.

Traditional pancake coil axes are perpendicular to the surface under test. TECA, on the other hand, uses tangential coils positioned on their sides, their central axes parallel to the surface under test. Eddy currents also flow parallel to the surface, making them capable of “diving” under cracks.

Its durable and rugged design allows for more reliable, repeatable, and operator-independent data unequalled by any other NDT method.



## Reddy instrument

Reddy 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.

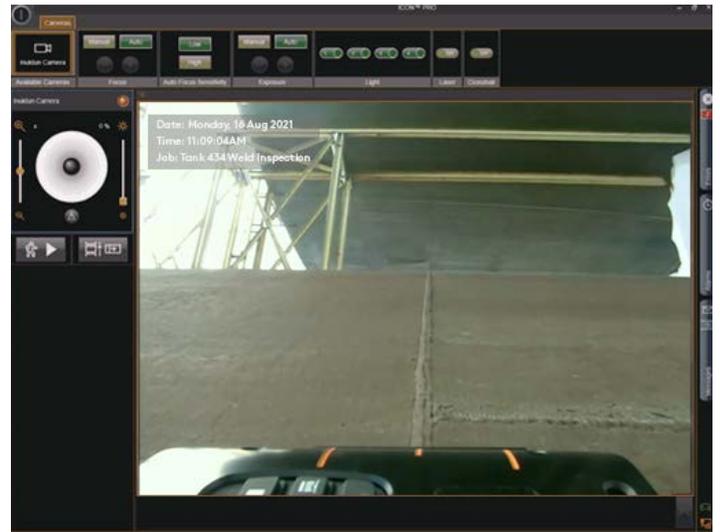
Reddy's embedded software Magnifi GO provides a real-time color map of the inspected area, making data analysis such as measurement and depth sizing of crack indications highly intuitive and easy. With assisted analysis tools and advanced reporting capability, Magnifi GO can generate a complete report on-site with minimal training.

## 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 Sharck 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), Tangential Eddy Current Array (TECA) 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: 30m (100ft)
ECA instrument	Reddy with Magnifi software
ECA probe	Sharck BW

## 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

## ECA PROBE

Type	Sharck™ BW (22 sensors)
Coverage	Up to 53 mm (2 in)
Maximum scan speed	200 mm/s (8 in/s)
Cable length	30m(100ft) longer options available
IP rating	Designed for IP65

## REDDY

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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