

Technical
Specifications

REDDY AC & TUBING ECT

The first portable system for AC and ECT tubing inspection

Reddy® is designed to replace a wide range of aging ECT instruments used to inspect air conditioners and perform other ECT tubing inspections.

PERFECT FOR AIR CONDITIONERS (AC) AND OTHER ECT TUBING INSPECTIONS

Reddy® is the solution designed to replace the wide range of aging instruments for air-conditioner and ECT tubing inspections. Reddy supports all AC and ECT probes currently on the market without adapters or reference probes to balance the absolute channel. No other portable system is battery-operated or sealed, or features a bright display, automated acquisition sequences, or an analysis software for on-the-fly reporting.

Since air conditioners are similar to small Heat Exchangers (HX) in terms of number of tubes, they benefit greatly from the portability and minimal setup time provided by Reddy. Larger HX-generating massive amounts of data and requiring other inspection techniques (such as ECA, RFT, NFT, NFA, MFL and IRIS)—are still, however, better served by a larger, multi-technology tester such as Ectane® coupled to a laptop computer for optimal data visualization and file management.

Reddy combines on-the-spot data acquisition, recording, and management completely doing away with handwritten reports. When an inspection is complete, reports can be generated in a single click—complete with screenshots of detected defects—signed, and handed to customers.



PERFECT AC PROBE MATCH

Eddyfi Technologies' AC probes are designed with the best probe coils configuration, providing a low fin noise with a higher defects detection, at straight, supports, tube expansions, and land areas. Moreover, in a single pass, the probe gives the inspector all the required data information for detection and defects characterization from the ECT bobbin and AC coil. The AC coil is required to detect circumferential cracking by substracting the tube expansion effect, where cracks mostly found. Moreover, they are mechanically highly durable, water resistant and detachable, perfectly made to turn your inspection as a success.

PORTABLE AND INTUITIVE

Because air conditioners are similar to small heat exchangers (HX) in terms of number of tubes, for example, portability and minimal setup time are essential. Reddy is roughly 30% lighter than the most widespread instruments currently in the field, and it features probe plug-and-play capabilities and a setup wizard for increased productivity.

DESIGNED FOR FIELD USE

Reddy is sealed and designed to IP65 requirements. The magnesium alloy casing is heavy-duty, cools without fans or external airflow, and is water and dust resistant. The adjustable stand and the top handle only add to the system's practicality in on-site inspections.

OPTIMIZED INSPECTION TIME

Automated acquisition sequences are a huge time saver, because they minimize the number of required operations to perform a complete inspection, such as starting and stopping the acquisition, recording data, and using foot pedals. Magnifi® GO also allows you to create tube lists, and features a dedicated setup wizard, automated data recording sequences, and a unique reporting format further enhancing productivity.

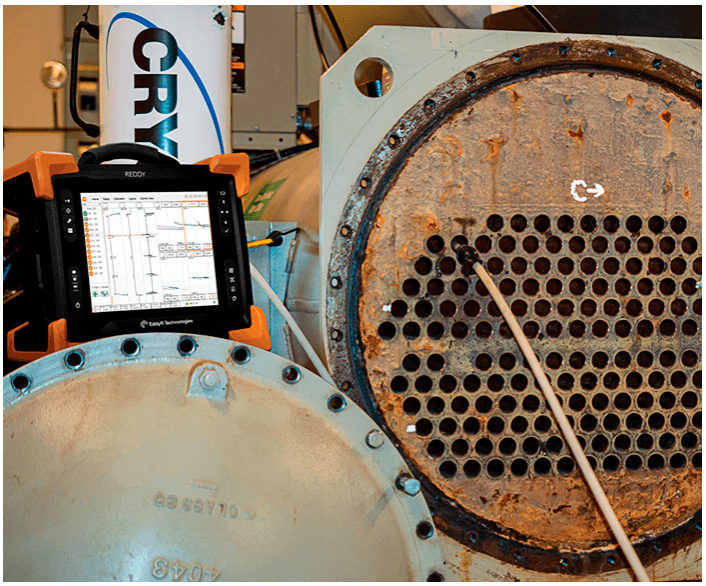


Figure 2: Reddy AC heat exhanger tube inspection.



Figure 1: Annotated breakdown of Reddy showing its key features.

MASSIVE MULTI-TOUCH DISPLAY

The premium-quality 26.4cm (10.4in) LCD display is optically bonded, non-reflective, and comes with 3mm (1/8in) strengthened glass. It's designed for gloved hands and all lighting conditions. The multi-touch capabilities make it easy to zoom and rotate views.

MODERN PC CAPABILITIES

Equipped with a robust, 100 GB internal solid-state disk drive (SSD) for secure inspection data. The embedded system offers standard connect-anywhere capabilities and advanced productivity tools optimizing field testing.

EMBEDDED SOFTWARE

Magnifi GO, Eddyfi's powerful and easy-to-use acquisition/analysis software, is tailored for air-conditioner and tubing inspections, and has a well-designed wizard to create setups. Furthermore, Magnifi GO makes collecting and reporting data incredibly intuitive. Fast, from setup to reporting.

DESKTOP DATA ANALYSIS

Magnifi GO is compatible with its full-fledged big brother Magnifi CPN. You can configure inspection setups for Reddy and perform in-depth inspection data analysis on your desktop or laptop computer.



Figure 4: Setup configuration and in-depth desktop data analysis with Magnifi.



Figure 5: Reddy AC heat exhanger tube inspection.



Figure 3: Annotated breakdown of Reddy showing its key features.

SPECIFICATIONS

INSTRUMENT

Dimensions (W × H × D)		355 × 288 × 127mm (14.0 × 11.3 × 5.0in)
Weight	w/ batteries	6.6kg (14.5lb)
	w/o batteries	5.7kg (12.5 b)
Volume		13 L (791 in3)
Power Requirements		100–240 VAC, 50–60 Hz
Power Supply		Direct VAC or onboard batteries
Maximum Input Current		1.5 A
Batteries	Type	Li-ion, rechargeable, DOT compliant
	Typical life	6–8 hours
Display		26.4cm (10.4in) Non-reflective (AR coating) Anti-fingerprint (Oleophobic coating) 3mm (1/8in), chemically strengthened glass cover Optically bonded LCD and touchscreen Passive backlight enhancement
Video Output		HDMI
Storage		SSD, 100 GB
Cooling		Sealed and fanless
I/O		Encoder or external control device
Connectivity		Gigabit Ethernet, Wi-Fi, Bluetooth®, USB 2.0 (×3)

ECT

Frequency range	5 Hz–10 MHz
ECT Bobbin/AC Connectors	4 pins
I/O Connector	18 pins
Dedicated Connector	30 pins
Generator Output/Coil Drive	Up to 20 Vpp
Injection Modes	Simultaneous, Continuous
Receiver Gain	41 dB range, 23–64 dB
Data Resolution	16 bits
Acquisition/Sampling Rate	Up to 50 000 samples/s

ENVIRONMENT

IP Rating	Designed for IP66
Operating Temperature	0–40°C (32–104°F)
Operating Humidity	95%, non-condensing
Pollution Degree Rating	2
Compliance	ASME, EN 61010-1, CE, WEEE, FCC Part 15B, ICES-003, AS/NZS CISPR 22, RoHS

The information in this document is accurate as of its publication. Actual products may differ from those presented herein.
© 2024 EddyfiTechnologies, Eddyfi, Reddy, Magnifi, Ectane, and their associated logos are trademarks or registered trademarks of Eddyfi Canada, Inc. in the United States and/or other countries. Eddyfi Technologies reserves the right to change product offerings and specifications without notice.

Eddyfi Technologies
Beyond current