



**Eddyfi
Technologies**
Beyond current

Technical Specifications

LYFT

Corrosion assessment redefined

Lyft® can scan through thick insulation, as well as aluminum, stainless steel weather jackets. It also benefits from a range of PECA, single-element PEC, and application-specific probes to support various applications.

BENEFITS

- State-of-the-art portable and connected instrument
- Inspect through thick insulation and fireproofing
- Save on insulation removal costs
- Real-time imaging for instant results
- Unrivalled productivity with PECA
- Easy setup with SmartPULSE™ calibration
- Highest confidence with Tau-scan™ and PermTool™ advanced analysis tools

APPLICATIONS

- Corrosion Under Insulation (CUI) and Fireproofing (CUF)
- Insulated pipes and vessels
- Through aluminum, stainless steel, and galvanized steel weather jackets
- Safe, in-service scab corrosion assessment, no need to remove the scale
- In-service inspection of storage tank annular plates
- Inspect ship decks without removing floor coverings

Eddyfi's dedicated application engineers and R&D team combined a world-class portable instrument with advanced software, sensors and accessories to transform PEC into a technique that reaches its full potential.



AUTOMATED SOFTWARE FOR RELIABLE AND REPEATABLE RESULTS

The Lyft software is equipped with automation and advanced algorithms designed to minimize the risk of operator-specific errors. With SmartPULSE™ technology, the software automatically and efficiently optimizes pulser and receiver parameters (such as gain, duration, time gates, filters, etc.) when preparing for an inspection. This optimization extends to wall thickness measurements, ensuring optimal performance and repeatability. Throughout the acquisition process, a suite of data quality verification checks continually monitors data, promptly notifying users to ensure usable and reliable data outputs.

UNIQUE TO LYFT—WALL THICKNESS MEASUREMENT TOOL FOR SMALLER FLAWS

Under sizing is a well-known phenomenon for PEC where defects smaller than the probe’s averaging area appear shallower than they really are. The Lyft’s Compensated Wall Thickness (CWT) tool mitigates the phenomenon by quantifying the minimum wall thickness of a specific region in a C-scan. The CWT tool’s specialized algorithms isolated a defect’s contribution to the A-scan signal to more precisely compute its minimum wall thickness.

CUI PROGRAMS REDEFINED

Corrosion Under Insulation (CUI) is possibly the greatest unresolved asset integrity problem in the industry. Current methods for measuring wall thickness over insulation (Liftoff) without removing it all have severe limitations. Lyft is a high-performance solution reinventing Pulsed Eddy Current (PEC).

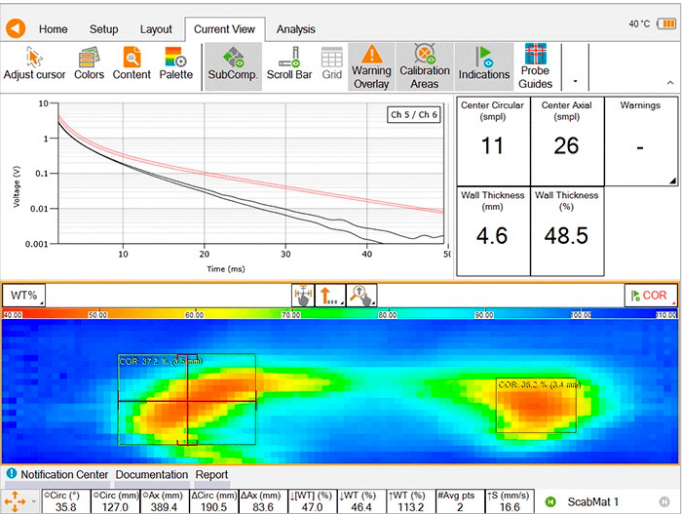


Figure 2: Lyft software CUI.



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

LYFT GO EMBEDDED SOFTWARE AND LYFT CPN FOR LAPTOP COMPUTERS

The Lyft software ecosystem is in constant evolution. Lyft GO is the dependable and intuitive data acquisition software on the Lyft unit. Lyft CPN uses the same user interface as Lyft GO with added features for analysis and is the prime tool for advanced data analysis. Now with the new PermTool™ and Tau-scan™, Lyft CPN is the first software of the industry to offer advanced analysis curves dedicated to deepen comprehension of the PEC signal and increase confidence in inspection results.

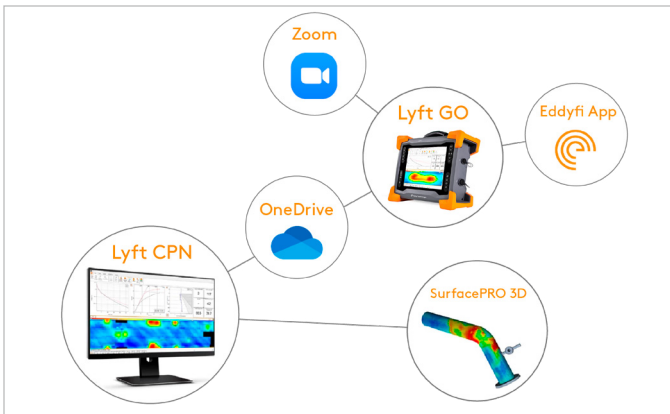


Figure 3: Lyft ecosystem.

A CONNECTED ENVIRONMENT

Lyft offers a comprehensive suite of hardware connectors and 3 software-connected tools, ensuring seamless operational efficiency and fostering effective team collaboration. While USB ports facilitates direct data transfer to other instruments or computers, Zoom Integration enhances team collaboration and enables streamlined product support by experts, OneDrive integration promotes secure and efficient data management and when utilized alongside Eddyfi Technologies' mobile application, users can effortlessly craft crystal-clear and context-rich reports.

OPTIMIZED PERFORMANCE FOR WALL THICKNESS AND LIFTOFF

The Lyft solution includes several sizes of plug-and-play probes for the right balance between wall thickness and liftoff.

The **PECA high-productivity probes** is capable of a single-pass coverage of 457mm (18in) in grid or high-resolution encoded dynamic mode. It supports metal thickness 6–25 mm (0.25–1.0in), insulation 0–102mm (0–4in), and stainless steel and aluminum weather jackets. CUI assessment has never been this fast, improving overall inspection productivity as much as 10 times.

The **single-element PEC probe** family supports metal thicknesses up to 100mm (4in), insulation as thick as 300mm (12in), and stainless steel/aluminum/galvanized steel weather jackets. They complement the array probes in limited-access, small-pipe, and thick-component inspections.



Figure 4: Lyft PECA pipeline CUI.

DESKTOP ANALYSIS SOFTWARE

SurfacePro 3D is the visualization and reporting software compatible with Lyft. It is designed to automatically create components and overlay stitched C-scan data. Import Lyft reports, create 3D components, and stitch color maps automatically. Easily import, export, create, and edit report templates. Compile and merge inspection data with associated images, inspection parameters, and defect tables for fast and compelling reporting.

THE BEST OF PEC IN A PORTABLE INSTRUMENT

The Lyft instrument is sealed and designed for IP65. Its magnesium alloy casing is tough, water and dust resistant, and cools without any external air exchange. The adjustable stand, the top handle, and four corner anchor points make it practical for on-site inspections. The embedded and portable Windows® PC offers standard connect-anywhere capabilities and advanced productivity tools that optimize field testing. The premium-quality 26.4cm (10.4in) LED display is optically bonded, non-reflective, comes with 3mm (0.12in) strengthened glass, and is designed for gloved hands, under any lighting conditions. The system also comes with two, hot-swappable batteries for extended battery operation.

GET EDDYFI CERTIFIED ANYWHERE

We are geared to offer ASME code compliant PEC training: a blend of e-learning and hands-on training at our offices or yours that will give you the necessary knowledge and skills to efficiently use PEC when inspecting assets.

SPECIFICATIONS

INSTRUMENT		PROBES**	
Dimensions (W x H x D)	355 x 288 x 127mm (14.0 x 11.3 x 5.0in)	Features	Remote control keypad
Weight (with battery)	6.6kg (14.5lb)		Lyft 27-pin Fischer connector
Volume	13 L (791 in ³)		Heavy-duty 5m (16.4ft) cable
Power requirement	100–240 VAC, 50–60 Hz	Nominal wall thickness	Up to 100mm (4in)
Power supply	Direct VAC or onboard batteries	Liftoffs	0–300mm (0–12in)
Batteries	Type	Smallest detectable defect volume	15% of footprint volume
	Typical	Minimum measurable remaining wall thickness	15% from nominal
Video output	HDMI		Stainless steel up to 1.5mm (0.06in)
Number of channels*	7	Weather jackets	Aluminum up to 1mm (0.04in)
	6.4cm (10.4in)		Galvanized steel up to 1.0mm (0.04in)
	Non-reflective (AR coating)	Pipe diameters	25mm (1in) up to flat surfaces
	Anti-fingerprint (oleophobic coating)		Carbon steel: –150–500 °C (–238–932 °F)
Display	3mm (1/8in), chemically strengthened glass cover	Test temperatures	Max. weather jacket, direct contact: 70 °C (158 °F)
	Optically bonded LCD and touchscreen		Max. weather jacket, probe shoe: 120 °C (248 °F)
	Passive backlight enhancement		
Storage	SSD, 100 GB	ENVIRONMENT	
Cooling	Sealed and fanless	IP rating	Designed for IP65
Encoder*	Quadrature	Operating temperature	0–40°C (32–104°F)
Connectivity	Gigabit Ethernet, Wi-Fi, Dual Mode Bluetooth® 2.1, 2.1+EDR,	Operating humidity	95%, non-condensing
	3.0, 3.0+HS, 4.0 (BLE), USB 2.0 (x3)	Compliance	ASME, EN 61010-1, CE, WEEE, FCC Part 15B, ICES-003, AS/NZS CISPR 22, RoHS
Probe recognition and setup	Automatic	APPLICATION SPECIFIC PROBE	
PERFORMANCE		Available models (Visit website for details)	Scab and corrosion blisters
Dynamic data acquisition*	Up to 15 points/s		Splash zone
Dynamic scan speed*	75 mm/s (3 in/s) (Typical), subject to variations based on component specifications and acquisition parameters.		Underwater
Grid mapping scan speed	Instant, less than 1 second (typical)		CUI under galvanized steel cladding
	Automatic PEC pulser-receiver parameters config.		Tank floor
	Full thickness sensitivity (OD and ID defects)		Custom probes
SmartPULSE	Reliable measurements with liftoff variations, weather jacket overlaps, straps, corrosion scabs. 1-point calibration (on nominal or known thickness), auto-normalization, repeatability optimization		Ship decks

* Lyft-GDA

** Refer to the *Understanding PEC Probe Selection and Footprint* on www.eddyfi.com/lyft for specific item details.

The information contained in this document is accurate as of the date of publication. Eddyfi Technologies reserves the right to modify any product specifications, features, or availability without prior notice. Actual products may vary from those depicted or described herein. All product names, logos, and brands referenced in this document are the property of their respective owners and may be trademarks or registered trademarks of Eddyfi Canada Inc. or its affiliates in Canada, the United States, and/or other countries. For a full list of trademarks, please visit eddyfi.com/en/trademarks. Nothing in this document shall be construed as granting any license or rights under any intellectual property rights of Eddyfi Technologies or any third party. Eddyfi Technologies is a Previa Business Unit.