

# PRINTED FLEXIBLE ECA (P-FLEX)

Printed Circuit Board Eddy Current Array Probes



# FLEXIBILITY REDEFINED: ECA PROBES PRINTED ON CIRCUIT BOARDS TO ADDRESS COMPLEX GEOMETRIES

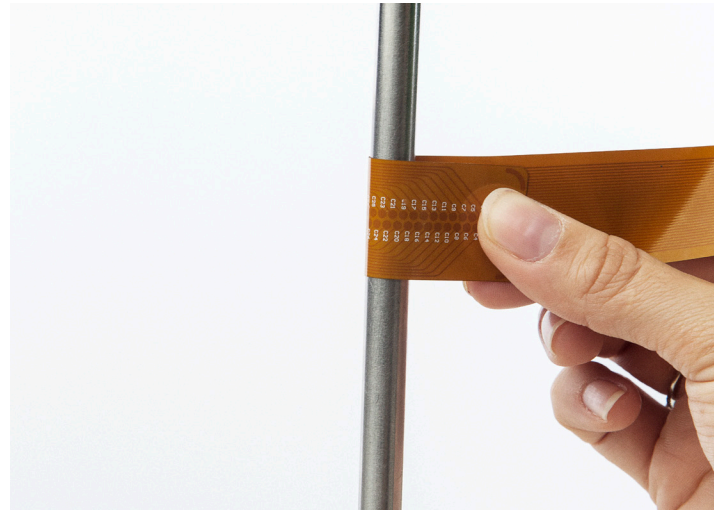
Eddyfi Technologies' family of printed flexible probes (P-Flex) offers unparalleled customization capabilities for inspecting complex geometries, with superior coil performance and easy replaceability.

## Flexible design and use

With a minimum bending radius of 2 mm (0.08 in), the P-Flex probes show exceptional flexibility for the inspection of complex and irregular surfaces. Their ultra-thin profile allows mounting easily onto a custom holder, facilitating access to tight or difficult-to-reach spaces. The same flexible probe can be reused with different holders and is detachable from its cable adapter to facilitate replacement. Gone are the days of time-consuming probe repairs when a single failing coil could delay an entire inspection.

## Highest signal-to-noise ratio

With printed coil density at the forefront of current probe technology, the P-Flex offers a higher signal-to-noise ratio (SNR) and coil uniformity compared to other printed probes on the market. Powered by Eddyfi Technologies' SmartMUX and advanced multiplexing topologies, this probe family delivers an unrivaled probability of detection of small flaws.



## Features and benefits

- Thin and flexible design to inspect various complex geometries
- 3 probe sizes for an ideal compromise between coverage and detection
- Minimum bending radius of 2 millimeters (0.08 in)
- Detachable probe easy to replace when needed
- Outstanding coil uniformity and signal-to-noise ratio



Probe specifications

- Available probe sizes: small, medium, large
- Probe thickness: 0.2 mm (0.008 in)
- Minimum bend radius: 2 mm (0.08 in)
- Minimum channel requirement: 64
- Detachable cable adapter: Yes



	SMALL	MEDIUM	LARGE
ECA-PFLEX-...	D-034-HF-032	D-056-HF-032	C-079-HF-032
Coil diameter	2.0 mm (0.08 in)	3.5 mm (0.14 in)	5.0 mm (0.20 in)
Number of coils	32	32	32
Coverage	34 mm (1.34 in)	56 mm (2.20 in)	79 mm (3.11 in)
Topology	Short double driver	Short double driver	Long single driver
Suitable materials	Non-ferromagnetic	Non-ferromagnetic	Ferromagnetic
Central frequency	1500 kHz	1000 kHz	500 kHz
Frequency range	1000 – 4000 kHz	500 – 2000 kHz	250 – 1500 kHz
Cable adapter required	ECA-PFLEX-CBL-D-032	ECA-PFLEX-CBL-D-032	ECA-PFLEX-CBL-C-032

ECA probe customization

The printed flexible ECA technology expands the capabilities for custom probe development. The engineering services offered by Eddyfi Technologies for the design and manufacturing of custom probes can now deliver inspection solutions for geometries that were previously inaccessible. Custom probes with an extended array coverage can be built into holders of any shape and size. This allows confidently tackling the most demanding applications with equipment perfectly tailored to its task.

