

# 243

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## MODEL



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## 243 MODEL: FOR METALLIC COATINGS

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**Accurate measurement, low cost of ownership, and dependable quality in a handheld unit.**

Oxford Instrument's 243 model is a **flexible and easy-to-use** system designed specifically for metal finishers. The 243 model requires only one probe to accurately measure metallic coatings over ferrous substrates—even on small, odd-shaped, or rough surfaces. This gauge is ideal for use on fasteners.

Using phase-sensitive eddy-current technology, this handheld instrument features user-friendly controls and measures with **accuracy and precision** comparable to x-ray fluorescence equipment.

To achieve a **low total cost of ownership**, the 243 System eliminates the need for multiple probes, calibration standards, operator training, and ongoing maintenance.

Oxford Instruments delivers **dependable quality** for all 200 Series applications, and stands behind its equipment with a responsive customer service team. Adding to its value, the gauge carries a 1-year warranty.

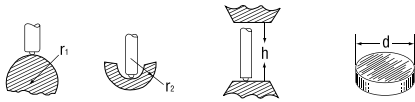
## MEASUREMENT TECHNOLOGY:

New phase-sensitive eddy-current technology enables the 243 Application to achieve accuracy within  $\pm 1\%$  (with reference to standards) and precision within 0.3%. Lift-off methods, such as magnetic induction and conventional eddy current, don't achieve reliable readings due to the resulting base effect and interference from specimen shape and texture.

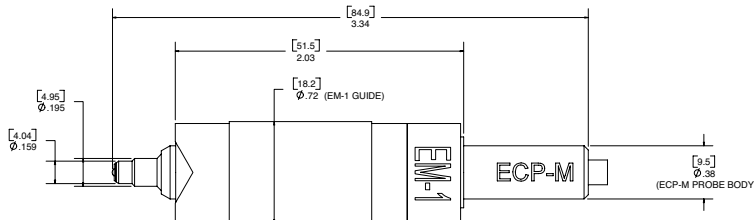
Oxford Instrument's unique application of eddy current technology minimizes the base effect, which enables exact measurements independent of a component's geometry. Moreover there is no need to calibrate on the bare part.

## ADVANCED ECP-M PROBE:

The ECP-M probe was designed specifically for difficult metallic coating applications. This single probe can measure metallic coatings, such as zinc, nickle, copper, chrome or cadmium, on ferrous substrates. A small tip provides for easy measurement of small, odd-shaped or rough components.



Minimum Radius on cylinder		Working Height (h)	Min. Measurement Area (d)	Min. Base Thickness (mils)
Convex (r1)	Concave (r2)			
.045"	.135"	4.0"	.090"	12



## PACKAGE CONSISTS OF:

- ECP-M Probe with removable guide
- Zinc Calibration Standards
- SMP-1 (Magnetic Probe) and RS232 serial cable can be purchased separately

Oxford Instruments Coating Measurement [sales@oicm.com](mailto:sales@oicm.com)  
 945 Busse Road  
 Elk Grove Village, Illinois 60007  
[www.oicm.com](http://www.oicm.com)  
 Toll-free: 800-678-1117 ext. 302  
 Outside US: 847-439-4404  
 Fax: 847-439-4425

## SPECIFICATIONS:

**Accuracy:**  $\pm 1\%$  with respect to reference standards

**Precision:** 0.3%

**Resolution:** 0.01 mils (0.1  $\mu\text{m}$ )

**Eddy Current:** Conforms to methods DIN 50984, BS5411 Part 3, ISO 2360, ISO 21968 (DRAFT), ASTM B499, and ASTM E376

**Memory Capacity:** 26,500 stored readings

**Dimensions:** 5 7/8" (L) x 3 1/8" (W) x 1 3/16" (D) (14.9 x 7.94 x 3.02 cm)

**Weight:** 9 oz (0.26 kg) including battery

**Units:** Automatic conversion between English and metric with a keystroke

**Interface:** RS-232 Serial port output with adjustable baud rate, for a printer or PC download

**Display:** Three digit LCD display, 1/2" (1.27cm) character height

**Battery:** 9V Alkaline

**Battery Life:** 65 Continuous hours



*Ideal for small, rough, or odd-shaped components.*

## OPERATING RANGES:

Plating/Fe	Thickness Range	Probe
Zn	0-1.5mil (38 $\mu\text{m}$ )	ECP-M
Cd	0-1.5mil (38 $\mu\text{m}$ )	ECP-M
Cr	0-1.5mil (38 $\mu\text{m}$ )	ECP-M
Ni	0-1.5mil (40 $\mu\text{m}$ )	ECP-M
Cu	0-0.40mil (10 $\mu\text{m}$ )	ECP-M
Mag	0-50mil (1270 $\mu\text{m}$ )	SMP-1

