BOWMAN
Coating Measurement Instruments

L SERIES XRF

High Precision Coating Measurement System

What's Distinctive:
Chamber volume 600% larger than other units

Who Benefits

The Bowman L Series desktop instrument was engineered for the diverse needs of the metal finishing industry, specifically manufacturers and contract shops who work with large fasteners, hardware, plumbing fixtures and other out-sized items.

Common Applications

- ZnFe/Fe and ZnNi/Fe for automotive components
- Cr/Ni/Cu/ABS for plumbing industry components
- TiCN/WCo, TiAlN/WC for cutting tools and similar applications

Like other Bowman XRF systems, the L Series precisely and quickly determines the thickness of coatings, and the elements present in the sample. The instrument measures up to five coating layers simultaneously, any or all of of which can be alloys.

Key Features

L Series XRF instruments use Bowman's proprietary micro spot focus x-ray tube as the energy source, a temperature-stabilized silicon PIN diode as the detector and a wide bandwidth, multi-channel amplifier to sort and count the radiated photons. Bowman Xralizer software employs advanced software algorithms to identify and quantify the thickness of the materials from the detected photons.

A micro focus video camera, aligned with the x-ray optics axis, identifies the area on the sample to be measured. An elevator, controlled by a focus laser, accommodates measurement samples of varying heights.

Made in the USA

Bowman
1125 Remington Rd.
Schaumburg, IL 60173

› **847.781.3523**
› www.bowmanxrf.com
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Specifications

Beam Size
Multi-Collimators: Standard Capillary Optics FWHM: Optional

Tube
Micro-Focused X-ray Anode: W/Mo/Rh
X-ray Path: Top Down

Solid State Detector
Silicon PIN Diode Detector with 190eV resolution or better
Silicon Drift Detector with 135eV resolution or better Optional

Focal Depth
Multi fixed focal depths with laser

Video Magnification
20x: Standard; 50x Optional
250x Dual Macro Camera Optional

Stage & Chamber
Z Control: Automatic
Z Travel: 10"
Base: Programmable Standard XY Travel: 10x10" Precision: 0.0004"

Element Range
Aluminum 13 to Uranium 92.

X-ray Excitation
50 W (50kV and 1mA) micro-focused W anode tube

Analysis layers and elements
5 layers (4 layers + base) and 10 elements in each layer.
Composition analysis of up to 25 elements simultaneously

Filters/Collimators
4 primary filters/4 motorized collimators

Digital Pulse Processing
4096 CH digital multi-channel analyzer with flexible shaping time. Automatic signal processing, including dead time correction and escape peak correction

Processor:
Intel, CORE i5 3470 (3.2GHz), 8GB DDR3 Memory, Microsoft Windows 10 Prof, 64bit equiv.

Camera optics:
1/4 CMOS-1280×720 VGA resolution

Power Supply:
150W, 100~240 volts; frequency range 47Hz to 63Hz

Dimensions (HxWxD):
Internal: 280mm (11), 550mm (22), 600mm (24)
External: 750mm (30), 700mm (28), 750mm (30)

Support

Bowman is a world-leading manufacturer of precision XRF coating measurement systems, with a robust local service network to support every system, at each customer location, worldwide. Our mission is to support you during every phase of your system's lifecycle – from system evaluation, selection, and commissioning, through maintenance and modernization.

Bowman service partners provide comprehensive, same-day service response for every need; we also work with customers to streamline their testing processes, and to generate the qualitative and quantitative information that's required, in less time.

Our commitment: to deliver support solutions tailored to the needs and quality culture of each individual customer, so that, with each subsequent XRF system purchase, there is no question... that the system will be a Bowman.

CE ANAB
Certificate #L2213

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