

# *Equipment for Microstructural Analysis*



**LECO**  
EMPOWERING RESULTS

# Equipment for Microstructural Analysis

Excellent sample preparation is the cornerstone of proficient materials inspection. LECO provides you with a solid line of metallographic sample preparation equipment for more effective materials testing and microstructural examination.

## Sectioning

Sectioning samples without breaking, bending, or burning the material is the goal of metallographic sectioning. LECO MSX and SX machines combine precision, versatility, and durability to confidently section your samples.



### SX100 Sectioning Machine

- Radial arm for manual sectioning at user-friendly working height
- No-frills robust design for simple operation
- Sloped floor for efficient coolant flow and minimal debris build-up
- Electronic mechanical braking system



### MSX Series Sectioning Machines

- Available in manual or automatic configurations
- Flexible model configurations with blades up to 17 in (432 mm)
- Integrated Y-table for parallel sections
- Filter bag system for easy clean-up
- Steel construction with built-in recirculating tank



## Coarse Grinding

Prepare your samples for mounting by removing unwanted surface material with LECO's rugged coarse grinding systems. Designed for wet or dry applications, they offer you excellent durability, safety, and convenience.



### BG Series Belt Grinders

- Single or double belt
- Powerful 1 hp motor
- Optional water cooling or dust extraction
- Safe, totally-enclosed belt drive
- Compact, bench-mounted construction



## Mounting

LECO offers an assortment of automatic, semi-automatic, and manual mounting press systems for either castable (cold) or compression (hot) mounting of quality metallographic or materials specimens.



### Castable Mounting/LECOMAT® Pressure Vessel

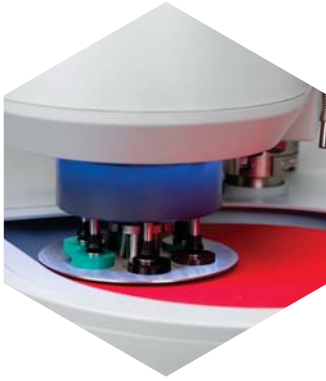
- Perfect for irregularly shaped or fragile samples that are pressure- or heat-sensitive
- Acrylics, epoxies, and polyesters available to match any mounting needs
- LECOMAT Pressure Vessel for semi-transparent rapid-cure mounts



### MX Series Mounting Presses

- Fully automatic mounting presses with dual-mount capabilities in all sizes
- Quickly change between mold sizes with the MX500
- Intuitive easy-to-use touchscreen interface
- Optional Water Recirculator unit to conserve water and keep press clean
- Slim 8 in (200 mm) wide profile maximizes laboratory counter space





## Grinding & Polishing

Regardless of how many samples you prepare each day, LECO offers a polishing system perfectly suited for your throughput and budget requirements.

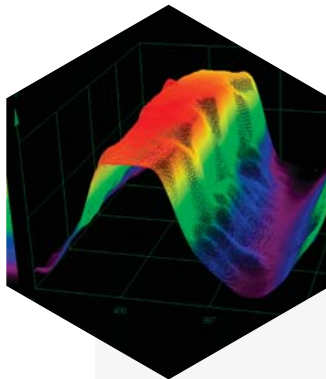
### SS1000 Grinder/Polisher

- Dual 8 in (200 mm) wheels driven by a single 0.75 hp (0.56 kw) motor
- Grinder/polisher head provides automated sample preparation
- Sample holders accommodate 1.0, 1.25, and 1.50 in samples



### PX Series Grinders/Polishers

- 8, 10, and 12 in (200, 250, 300 mm) wheel sizes available
- Vivid color touchscreen for intuitive and simple operation
- Fixed and individual sample holders up to 2 in (50 mm)
- Automatic polishing liquid dispensers (optional on some models)
- Robust design; free-flowing spiral drain with bowl wash
- Base motor configurations 0.75 hp (0.56 kw) and 1.5 hp (1.1 kw) available



## Optical

LECO provides you with the right tools needed for high-performance metallurgical examination, research & development, and quality control. With a full range of optical equipment and accessories to choose from, our team of specialists will go the extra mile to get you where you need to be.

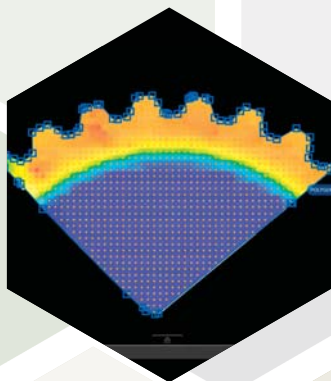
### PAX-it™ & IA44 Image Analysis/Management

- Customizable, application-specific toolbar buttons
- Full multi-field image analysis
- Powerful image and data management



## Microscopes

- VX4 Inverted Metallurgical Microscope
- Olympus® Metallographs, Upright and Stereo Microscopes
- Olympus® DSX1000 Digital Microscope
- Models designed for today's research, production, and metallurgical demands



## Hardness Testing

When it comes to accuracy, repeatability, and convenience, LECO's Hardness Testing Systems hit the target for unbeatable quality and value. Whatever your hardness testing needs, LECO can help find the system that is right for you.

### AMH Series Hardness Testers

- Automated hardness testing for time-saving convenience
- Patented\* PANOPTIC method for vivid sample reconstruction
- Advanced Analysis Module to perform hardness color mapping
- Supports microindentation and Macro-Vickers load configurations

\*U.S. Patents 6,996,264; 7,139,422. Other patents pending.



### Vickers, Knoop, Brinell, and Rockwell Hardness Testers

- Durable and easy-to-use for accurate, reliable results
- Variety of models to meet your testing needs and budget





## Elemental Analysis

Since 1936, LECO has remained the authority in rapid elemental determination by combustion/fusion. Today our field-tested instrumentation features the latest technology and conveniences that have made LECO synonymous with elemental determination in metals.

- Rapid determination of carbon/sulfur in a variety of ferrous and nonferrous metals, ores, and other inorganic materials



- Determination of nitrogen and oxygen in under one minute via inert gas fusion method pioneered by LECO



- Atomic emission spectroscopy, for bulk or quantitative depth profile analyses, determines up to 24 elements—choose from over 60 detectable elements



- Measurement of hydrogen content in high-temperature metals, refractories, and high-alloy steels



## Consumables

Even the best metallographic equipment cannot compensate for sub-standard consumable products. LECO offers high quality consumables for all of your metallurgical applications.

- Sectioning Blades
- Diamond Wafering Blades
- Cutting Oils/Rust Inhibitors
- Mounting Materials and Supplies
- Abrasive Belts
- Abrasive Discs
- CAMEO® Magnetic Disc System
- Abrasive Rolls, Strips, Sheets
- Diamond Grinding Discs
- Polishing Cloths
- Polishing Powders
- Liquid Polishing Suspensions
- Diamond Sprays/Suspensions/Compounds
- Specimen Caps
- Nano Diamond Star Polishing Film
- Fastick™ Polishing Cloth Disc System

[www.lecodirect.com](http://www.lecodirect.com)

High-quality LECO metallographic consumables are now available for purchase online! Go to [www.lecodirect.com](http://www.lecodirect.com) to create your account and browse the LECO catalog. Purchases can be made with a credit card or valid Purchase Order. Available in U.S.A. only.



## LECO Service

### Service

Available in your plant or lab, or at our shop in St. Joseph, Michigan.

### Repair

Complete repair and overhaul of your instrument by factory trained service specialists.

### Equipment Calibrations

Calibrations are A2LA accredited in the U.S.A. and Canada (certificate #1845.01).

### Technical Support

Call LECO Service if you have any questions or problems, 269-985-5497.

**Routine maintenance extends the life of your instruments.**

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