

Buehler's Family of Products



BUEHLER® QUALITY AT WORK



Another Technological Advance From Buehler



SAMPLMET® 2 Abrasive Cutter

- Smallest, most affordable laboratory abrasive cutter
- Designed to meet low volume user needs
- Compact design, requires no air
- Durable 1Hp (735W) motor and 9" (229mm) blade enables 1½" (32mm) cut capacity
- **Catalog number 95-C1700**

DELTA™ ABRASIMET® Abrasive Cutter

- Standard manual metallographic laboratory cutter
- Manual action allows operator to control cut process
- Select models and options and vises to suit application
- Powerful 4Hp (3kW) motor and 10" (254mm) blade enables 3.75" (95mm) diameter cut capacity
- **Catalog number 10-2150 & 10-2155**



ABRASIMATIC® 2 Abrasive Cutter

- Expands upon the capabilities of the ABRASIMET® 2 by increasing automation
- Versatile T-slotted work table provides spacious work surface for sample clamping as well as specialized vises
- Standard Electronic Brake increases safety by quickly stopping the blade upon opening hood or hitting STOP
- Powerful 4Hp (3kW) motor and 10" (254mm) blade enables 3" (76mm) diameter cut capacity
- **Catalog number 95-C1820**

OSCILLAMET® Abrasive Cutter

- Oscillation minimizes area of contact to give burn free sections and increase cutting capacity
- Making cuts into hard to reach areas, such as crankshafts, is easy due to the vertical wheel positioning
- Powerful 3Hp motor and 12" (305mm) blades section large samples as deep as 12½" (320mm) or as bulky as 3¾" x 4" (95mm x 102mm)
- **Catalog number 10-1040**



DELTA™ Orbital and Automatic Chop Abrasive Cutter Family

- Models and options and versatile accessories allow machine to be tailored to material application
- Easy-to-use programmable systems with large LCD display
- Largest orbital cutter offers a 15Hp (11kW) motor and using 18" (450mm) wheels provides 6.75" (150mm) cut capacity
- 10Hp (7.5kW), 7.5Hp (5.5kW) and 5.5Hp (4.0kW) units also available with cut capacities from 6" (150mm) to 3" (75mm)
- **Catalog number 10-2318 and 10-2218**

For over 65 years, Buehler Ltd. has been a leading manufacturer of scientific instruments, supplies, and laboratory furniture for use in materials analysis.

ISOMET™ Low Speed Saw

- The “original” precision saw designed for low volume applications
 - Affordable and compact
 - Low 0-300 rpm speed and loads produce minimum deformation
 - 5mm sample positioning accuracy via manual micrometer
 - ½Hp (15W) motor, up to 5” (127mm) blades, and 1¼” (32mm) cutting capacity
 - **Catalog number 11-1280**
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ISOMET™ 1000 Precision Saw

- Precision saw with LED Display and touch panel controls
 - Sample positioning via facia panel increases ease-of-use
 - Increased speeds, 100-975 rpm, loads and blade size enable a wider variety of samples to be cut quickly with low deformation
 - ½ Hp (93W) motor, up to 7” (178mm) blades, and 1½” (38mm) cutting capacity
 - **Catalog number 11-2180**
-



ISOMET® 4000 Linear Precision Saw

- Easy-to-use fully automatic linear precision saw with SMARTCUT, 2µm sample positioning and LCD display
 - Linear action and large workspace combine precision cutting with longer sample sectioning, up to 6” (150mm) length
 - Productive 1.25Hp (950 Watt) motor, up to 5000 rpm, 8” (200mm) blades, and 2” (50mm) cutting capacity
 - **Catalog number 11-2680**
-



ISOMET® 5000 Linear Precision Saw

- Expands upon the capabilities of the ISOMET® 4000 Linear Precision Saw with increased automation and programmability
 - Automatic sample positioning to 2µm via facia panel and automatic linear feed advance and retract
 - Automatic serial sectioning for multiple cuts to desired thickness
 - Compatible with all ISOMET® 4000 accessories and vises
 - **Catalog number 11-2780**
-



PETROTHIN® Thin Sectioning System (shown)

- Re-sectioning and grinding in one unit
- Stainless steel cutting/grinding compartment
- Digital micrometer for thickness adjustment
- **Catalog number 38-1450**

PETROPOL™ Polishing System

- Variable speed 15-150 rpm with LED display
 - Timed or manual operation
 - Built-in slurry dispenser
-





SIMPLIMET® 2 Mounting Press

- Affordable, durable press
- Safe hydraulic pressure application requires no air
- Accessory water cooling decreases sample cycle time
- Operator provides pressure application during process, and changes heater/cooler units
- **Catalog number 20-1410**

SIMPLIMET® 1000 Automatic Mounting Press

- Durable automatic mounting press with basic features that provides effective mounting at an affordable price
- Electrohydraulic operation requires no air
- Standard duplex molds double sample throughput by making two mounts per cycle
- Liquid Crystal Display (LCD) and touch pad controls make operation simple
- Dual temperatures of 300°F and 350°F (150°C and 180°C)
- **Catalog number 20-1415**



SIMPLIMET® 3000 Automatic Mounting Press

- Expands upon the capabilities of the SIMPLIMET® 1000 by increasing the level of automation
- Automatic mounting press with mold sensing and automatic parameter loading
- Programmable system with 25 user definable methods
- Up to 2" (50mm) duplex molds standard
- **Catalog number 20-1435**

MINIMET® 1000 Grinder/Polisher

- Low volume, single mount semiautomatic grinder/polisher that prepares a wide variety of materials
- Easy-to-use touch panel controls and LED Display
- When paired with the ISOMET™ Low Speed Saw, provides the basis for serving as a low deformation, low volume laboratory
- **Catalog number 69-1100**



METASERV® Grinder/Polishers

- Affordable manual grinder/polishers with single and dual units
- Select 12" (305mm), 10" (250mm), or 8" (205mm) platens
- Upgradable to semiautomatic systems with addition of AUTOPOL® Polishing Attachment
- Single, dual, and variable speed units allows operator to select the desired rpm for application needs
- **Catalog number 95-2800 Series**

ALPHA & BETA Grinder/Polishers & VECTOR™ Power Heads

- Dual and variable speed units allow operator to select rpm for application needs
- Select from 8" (200mm) and 10" (250mm) platens
- Upgradable to semiautomatic systems with addition of VECTOR or VECTOR™ LC Power Heads
- Power Heads give increased productivity and sample consistency, especially for multiple users and materials
- **Catalog numbers 49-5000 ALPHA, 49-5100 BETA, 60-1990 VECTOR, 60-1996 VECTOR LC**



GRINDER/POLISHERS

The Buehler Family of



ECOMET® 3, 4, and 6 Grinder/Polishers

- Manual single and dual unit family of grinder/polishers
- Upgrade to semiautomatic system with AUTOMET® 2 & 3 Power Heads
- Select 8" (203mm), 10" (250mm) or 12" (305mm) platens to balance grinding capacity and consumable economy
- Simple LED Display, up and running in five minutes
- **Catalog numbers 49-1750 ECOMET 3, 49-1775 ECOMET 4, 49-1885 ECOMET 6**



BUEHLERVANGUARD® 2000 Fully Automatic Preparation System

- Fully automatic system combines the function of a semiautomatic grinder/polisher, a dispensing system, an ultrasonic cleaner, and specimen dryer in one compact affordable unit
- Sample consistency is dramatically increased, especially for multiple users, because they can easily recall stored sample preparation methods due to the automated preparation process
- Saves consumable costs by using a controlled dispensing system
- **Catalog number 63-2000**

PRIMET™ Modular Dispensing Satellite

(shown with PRIMET™ 3000 Modular Dispensing System)

- Abrasive dispensing system with peristaltic pump technology
- Increases specimen consistency and reduces waste
- Safe, no mist dispensing with user selectable time and amount dispensed
- For use with water and oil-based diamond slurries and suspensions and most final polishing abrasives
- **Catalog Number 40-2810**



Buehler products are used throughout the world in manufacturing facilities, industrial laboratories, and universities to analyze all types of solid materials, including ceramics, metals, composites, glass, rock and plastic.



OMNIMET® Image Capture & Report Generation System

- Economical electronic image and data storage
- Simple report generation with embedded images
- Eliminates expensive, time consuming instant film
- Upgradable to image archive and image analysis systems
- **Catalog number 86-2000**

OMNIMET® ARCHIVE Digital Imaging System

- Easy-to-use tools for image annotation, dimension and angle measures
- Simplified archiving of images from the database to other drives and removable media
- Upgradable to OMNIMET® Image Analysis Systems
- **Catalog number 86-4000**

OMNIMET® EXPRESS Image Analysis System

- Easy-to-use push-button analysis simplifies operation
- Select from a wide range of analysis modules to meet your specific requirements
- Upgradable to the fully flexible OMNIMET® ENTERPRISE Image Analysis System
- **Catalog number 86-3000**

OMNIMET® ENTERPRISE Image Analysis System

- Powerful imaging tools provide fully customizable routines to application
- Select from a wide range of color cameras
- Point and click operation builder makes construction of analysis routines simple
- **Catalog number 86-1000**



OMNIMET® MHT Automatic Microindentation Hardness Testing System

- Fully automated operation with databased report generation
- Standard and custom traverse pattern capability using motorized stage
- Report outputs include data tables, graphs and effective case depth
- Vickers and Knoop indentation measurement with Rockwell conversion available

MICROMET® 5100 Series Microindentation Hardness Testers

- Four model types
- Large easy-to-use LCD touch screen
- Choice of Vickers or Knoop
- Load range of 10g - 1000g
- Extended load model 1g - 2000g with 13 steps
- Dual indenter, motorized turret model
- Data storage, statistics, and print out
- Engineered to conform to ASTM E 384 and ISO 6507-2 / ISO 4546
- OMNIMET automation upgrade packages available
- Consult your nearest Buehler office for specific models and accessories



MACROMET® 5100 Series

- 5 different models conforming to ASTM E18 and ISO 6508-2
- All Rockwell and Rockwell Superficial scales
- Digital model available with motorized-force application and closed loop control
- Large easy-to-use LCD touch screen for digital model
- Statistical display of data with editing and printing options on digital model
- Consult your nearest Buehler office for specific models and accessories

MACROVICKERS® 5100 Series

- Vickers or Knoop Indentors
- Large easy-to-use LCD touch screen with built-in conversion to Rockwell scales
- Two models available: 1-50kg load and 0.2-20kg load range conforming to ASTM E92 and ISO 6507-2
- Automated turret rotation and load application
- Consult your nearest Buehler office for specific models and accessories



Metallurgical, Stereo & Polarizing Microscopes

- Upright and inverted Microscopes
- BF, DF, POL, DIC modes of illumination
- Analog and digital camera options
- 10-2000x magnification
- TV ports for hook up to OMNIMET® Digital Imaging
- Buehler exclusive: DIGIMET® 2000 Metallograph (shown). This microscope provides Brightfield illumination from a 30W Halogen illuminator and carries up to 5 Nikon infinity corrected objectives.
- Consult your nearest Buehler office for specific models and accessories



BUEHLER® Consumables

- Cutting, grinding, mounting and polishing supplies for materials preparation
- Complete line of engineered products for superior results
- Consistent quality and performance
- Preparation supplies for manual and automatic systems
- For a complete listing of Buehler consumable supplies, please refer to Buehler's Consumables Buyers Guide or contact your Buehler Sales Engineer or Distributor

Final Polishing Suspensions

- Developed in our research laboratories to give the metallographer an easy-to-use, pre-prepared polishing media which has the same consistency from day to day and from lot to lot
- Packaged in convenient applicator bottles
- High surface removal rates
- Superior polishing results
- Suitable for manual or automatic dispensing
- Full range of products for virtually any material



METADI® Diamond Suspensions

- Nontoxic, noncombustible and environmentally safe
- Superior polishing results
- Suitable for manual or automatic dispensing
- Available in monocrystalline and polycrystalline formulations
- Provides reduced subsurface deformation and is ideal when working with samples composed of different materials or hardnesses

New BUEHLER® APEX™ SYSTEM

- System solutions for magnetically attaching and reattaching surface to platens, quick specimen grinding, excellent preparation and containinet free storage.
- APEX SYSTEM includes: APEX Quick-Change Magnetic System, NEW APEX Diamond Grinding Discs, APEX HERCULES Rigid Grinding Discs and APEX Storage Cabinets
- Available in 8" (203mm), 10" (254mm), 12" (305mm) and some in 14" (350mm)
- APEX DGD micron sizes: 165µm, 125µm, 70µm, 45µm, 30µm, 15µm, 9µm, 6µm, 3µm and 0.5µm.



MICROSCOPES

The Buehler Family of

CONSUMABLES

The Buehler Family of

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