

BUEHLER® EcoMet® 250 Grinder-Polisher & AutoMet® 250 Power Head

- Choice of 8" (203mm) or 10" (254mm) Diameter Platens
- Variable Speed Base Platen and Power Head
- Sealed Membrane Keypad with User-Friendly Controls
- Durable Cast Aluminum Construction
- Stain, Chip and Corrosion Resistant Finish
- Unique LED Lighting Illuminates Platen, Bowl, Specimens and Working Area
- High Torque Motors for Large and Multiple Specimen Preparation
- Retractable Water Hose and 360° Bowl Rinse System
- EcoMet® 250 Grinder-Polisher Base Only for Manual Preparation
- Upgrade to Semi-Automatic Preparation with AutoMet® 250 Power Head
- Repeatable Sample Preparation Every Time



The Future of Sample Preparation is Here! Consistent and Repeatable Results



EcoMet® 250/AutoMet® 250 Family

The EcoMet® 250 family of Grinder-Polishers and AutoMet® 250 family of Power Heads have been designed to meet the needs of the materials analyst requiring the versatility of manual or automatic sample preparation. The EcoMet 250 Grinder-Polisher can be used alone for manual grinding applications, or it can be combined with the AutoMet 250 Power Head for semi-automatic applications. Both are powered using 85-264 VAC, 50/60 Hz, single-phase power supply.

EcoMet® 250 Grinder-Polisher Base

Features

The EcoMet 250 accommodates either an 8" (203mm) or 10" (254mm) diameter platen and features variable platen speed control from 10 to 500 RPM. The unique "D" style bowl design provides ample hand room for easy platen changing. The removable splash guard keeps water and consumables in the bowl and away from the operator.

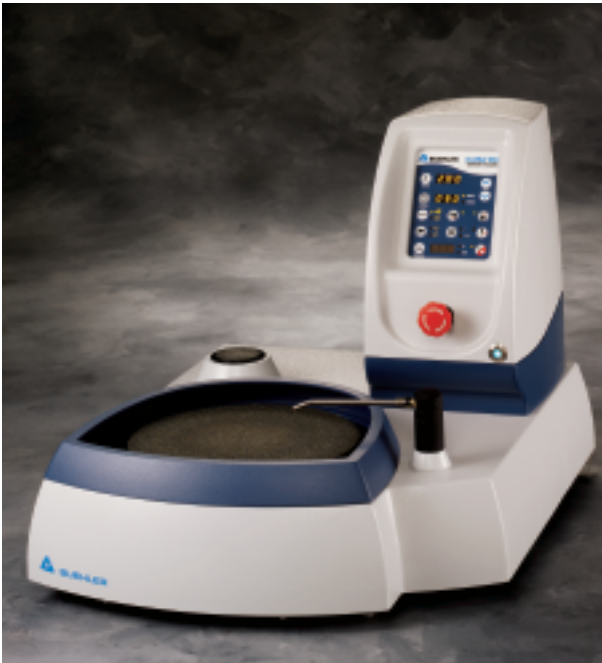
Designed with platen cooling to help minimize platen heat build-up and reduce sample deformation. The adjustable water flow control nozzle can be positioned over the platen. The retractable and stowable water hose allows the operator freedom to spray water where chosen. The unique 360 degree bowl rinse system helps clean the entire bowl during the grinding/polishing step(s). Base can be upgraded to a semi-automatic sample preparation system with the addition of an AutoMet 250 Power Head.

Construction

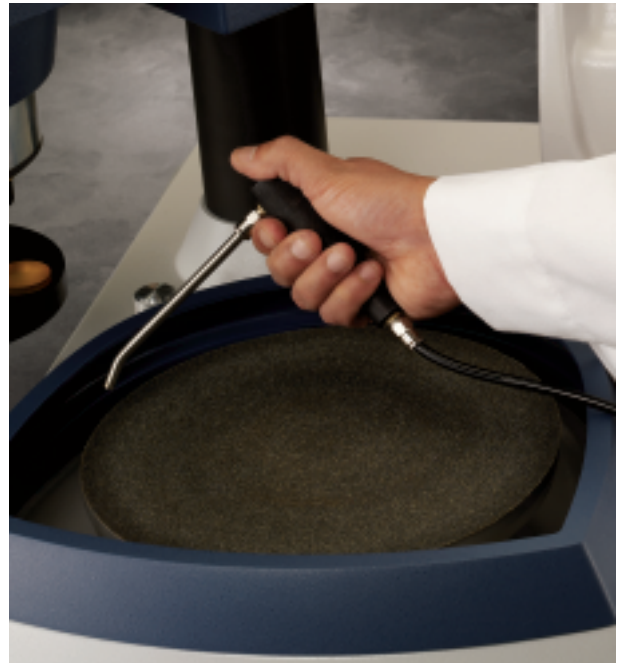
A high torque, 1 hp (750 Watt) continuous-duty motor prevents platen stalling, even under the most extreme grinding conditions. This Universal D/C motor ensures constant platen speed and torque, regardless of applied load. The platen has a belt-driven design for whisper quiet operation.

The durable base casting is constructed of thick heavy-duty aluminum and is coated with an excellent

stain and chip resistant finish for a long lasting, like-new appearance.



EcoMet® base for manual grinding.



Retractable water hose reaches over entire bowl.



Membrane keypad control panel with tactile feedback buttons, bright LED's and easy-to-read icons.



Large, red and easily accessible mushroom style emergency-stop button for operator safety.



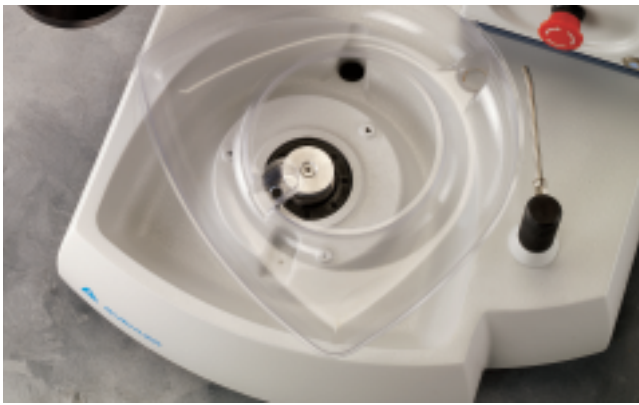
Blue flashing irradescence Power Standby button is easy to view.



D-style bowl for easy platen changing.



Removable splash guard.



Bowl liner in machine.



Water control knob.

AutoMet® 250 Power Head

The AutoMet 250 Power Head upgrades the EcoMet 250 Grinder-Polisher from manual operation into semi-automatic sample preparation operation, increasing productivity and specimen consistency.

Single or Central Force

The AutoMet 250 Power Head is designed for Single or Central Force applications. Six Single Force fingers prepare one to six samples at the same time. The finger tips are engineered to provide optimally flat sample preparation. Single force is selectable from 1-10 lbs (5-45 N).

Use Central Force for multiple simultaneous sample preparation. A soft start or stop motor function prevents sample damage. Central force is selectable from 5-60 lbs (20-260 N). The vertical drive allows head pressure without the need for compressed air in Central Force operation.

Features

The variable speed head is adjustable from 30-60 rpm, and can be adjusted for complimentary or contra (clockwise or counter-clockwise) rotation. Nine bright LED's lights illuminate the platen, bowl, specimen holder,

and working area. A simple clamping chuck design allows the operator to quickly attach and remove the specimen holder with a single pull of the clamping ring. The two-button start is designed to ensure operator safety. The head locking handle secures the power head into stationary position. A head location stop lever sets the exact location of the power head over the platen surface every time for correct sample positioning and repeatable results.

Control Panel

The EcoMet/AutoMet family is designed with a separate control panel housing constructed of a heavy-duty aluminum protective shell. The sealed waterproof membrane keypad allows easy cleaning. Tactile feedback buttons with an audible "click" ensures the operator that their control commands have been entered. The control panel consists of time, speed, fresh/recirc, water on/off, platen on/off, auxilliary dispensing on/off, single/central force mode, head rotation, force and pause/stop buttons.

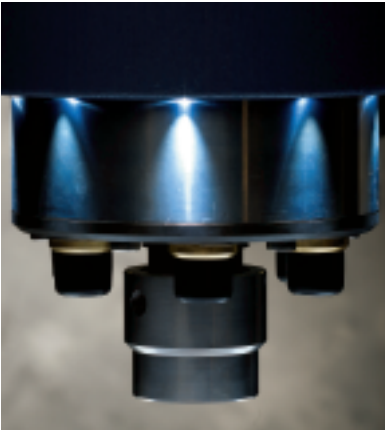
Operating parameters, such as speed and force, are adjustable during the preparation sequence. The pause function allows the operator to stop operation during a step and complete that step at a later time. A loud and audible "beep" alerts operator to the end of cycle. The



EcoMet® Grinder-Polisher and AutoMet® Power Head for semi-automatic preparation.



Quick release lift lock chuck provides quick connection and removal of specimen holders.



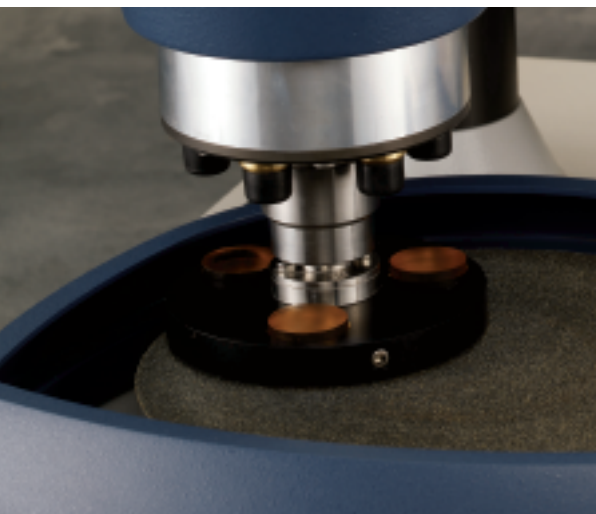
Unique LED lighting illuminates platen and working area.



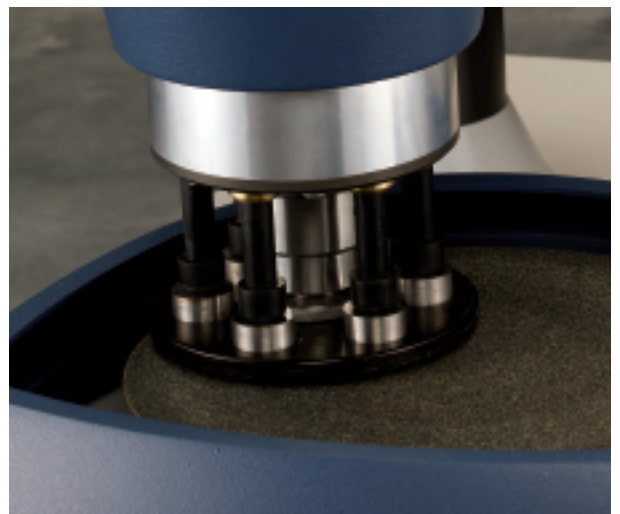
Head locking handle secures head firmly.



Head position Locator Stop Handle allows specimens to be located at the same position over the platen every time.



Central force application.



Single force application.

built in memory retains last parameters setting. The time-up clock tracks manual grinding operations and the time-down clock tracks semi-automatic sample preparation methods.

The unit of measure is selectable between imperial or metric. Three-digit LED's display the time, speed and force while 15 yellow LED's highlight indicator status. The power on/off button is equipped with a blue flashing LED indicator. A large emergency off switch, built-in circuit protection and low voltage controls ensure operator safety.

Accessories

PriMet® 3000 Modular Dispensing System and PriMet® Modular Dispensing Satellite

Connect the EcoMet/AutoMet family to the optional PriMet® 3000 Modular Dispensing System for automatic fluid suspension dispensing during preparation steps. The PriMet® 3000 Modular Dispensing System and PriMet® Modular Dispensing Satellite use peristaltic pumps, no mist technology, to distribute lubricant, diamond and colloidal polishing suspensions. Controlled dispensing offers repeatable results regardless of operator.



PriMet® 3000 Modular Dispensing System and PriMet® Modular Dispensing Satellites.

Recirculating System

Connect the EcoMet/AutoMet family to the optional recirculating system. This system prevents contaminants from being released into local water drain lines. It has a 24 gallon (91ℓ) reservoir and sits on a roller cart. Baffles in the reservoir form contamination free compartments and minimize the abrasives entering the grinder-polisher intake supply. The remaining abrasives and contaminants can then be disposed or recycled.



Recirculating system with baffles.

EnvironMet® Systems

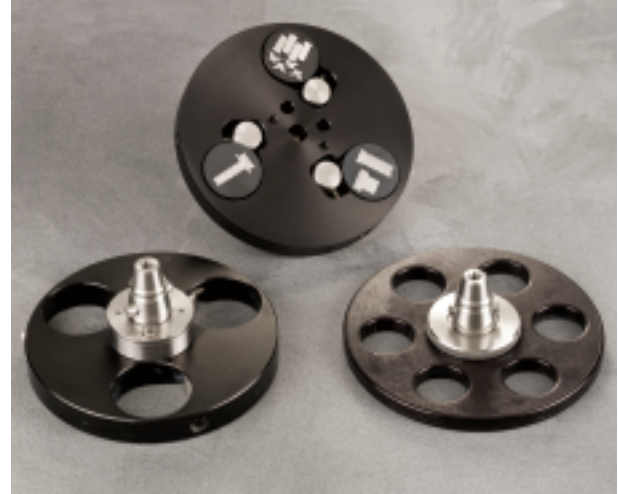
Connect the EcoMet/AutoMet family to the optional EnvironMet® Filter System. This system is ideal for laboratories concerned with water regulations, conservation requirements and environmental issues. The filter system captures contaminants down to 1 micron. It is available with a 1-micron filtering system with a 6 gallon (23ℓ) recirculating reservoir or a 100-micron filtering system for use with fresh water. Compressed air is required.



EnvironMet® Filtering System.



Tapered drive adapter provides easy specimen holder connection and removal.



Variety of single and central force specimen holders available.

Specifications

Machine Power

Voltage
85-264 VAC

Frequency
50/60 Hz

Phase
Single

Base

Motor Power
1 Hp (750 W)

Platen Wheel Speed
10-500 rpm, in 10 rpm increments

Wheel Direction
Clockwise or counter-clockwise

Water Supply Hose
¼" (6mm) OD tube

Water Supply Pressure
40-100 psi (2.8-6.9 Bar)

Water Return Hose
1" (25mm) ID tube

Power Head

Motor Power
0.156 Hp (116 W)

Rotation Direction
Complementary or contra
(Clockwise or counterclockwise)

Speed
30-60 rpm, in 10 rpm increments

Central Specimen Force
20-60 lbs (20-260N)

Single Specimen Force

1-10 lbs (5-45N)

Air Supply Hose
0.23" (6mm) OD tube

Air Supply Pressure
30 psi (2 Bar)-60 psi (4 bar)

Specimen Capacity

Central Mode
1", 1¼", 1½", 25mm, 30mm and
40mm

Large and irregular specimens

Single Mode
1", 1¼", 1½", 25mm, 30mm and
40mm

Power Usage - Base and Head

Wattage
1.63 kW

Current

14 amps @ 115 VAC

7 amps @ 230 VAC

Control Panel

Display
Three 3-digit LCD displays

Time
20 seconds to 99 minutes

Unit of Measure
Imperial or Metric

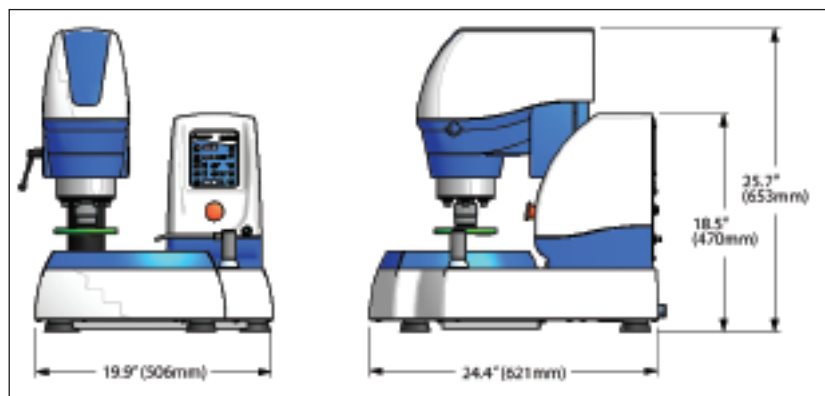
Shipping Weight

175 lbs (385 kg)

Regulatory Standards

CE marked

EC applicable directives



Dimensions

Ordering Information

The EcoMet® 250 Grinder-Polisher includes a splash guard, removable bowl cover, water filter kit, electrical power cord, a selection of grinding paper and polishing cloths, bowl liner and instruction manual. Platens, paper holding bans and cloth clamps sold separately.

49-7200 EcoMet® base only, membrane keypad control

49-7250 EcoMet® base with Standard Head, membrane keypad control

The AutoMet® 250 Power Head includes a mounting post, lift-lock chuck and operating instructions. Specimen holders, drive adapters and air filter/regulator sold separately. AutoMet 250 must be installed by authorized Buehler service personnel or at factory.

60-7230 AutoMet® 250 Power Head

Specimen Holders for Central Force

Part No.	Description
60-9000	Drive adapter for central force holders (Required)
60-2422	Specimen Holder, Teardrop, 1¼" (32mm) x 6
60-2482	Specimen Holder, Barrel, 1" (25mm) x 6
60-2483	Specimen Holder, Barrel, 1¼" (32mm) x 6
60-2484	Specimen Holder, Barrel, 1¼" (32mm) x 3
60-2485	Specimen Holder, Barrel, 1½" (38mm) x 3
60-2486	Specimen Holder, Barrel, 30mm x 6
60-2487	Specimen Holder, Barrel, 40mm x 3
60-2408	Specimen Holder, Blank
60-2409	Specimen Holder, Rectangular, 1" x 1¼" (25.4mm x 32mm) x 4

Specimen Holders for Single Force

Part No.	Description
60-9005	Drive adapter for single force holders (Required)
60-9010	Specimen Holder, single force, 1" x 6
60-9011	Specimen Holder, single force, 1¼" x 6
60-9012	Specimen Holder, single force, 1½" x 6
60-9020	Specimen Holder, single force, 25mm x 6
60-9021	Specimen Holder, single force, 30mm x 6
60-9022	Specimen Holder, single force, 40mm x 6
60-9030	Specimen Holder, single force, for use with distance rings
60-9031	Distance rings, 1", pk 6
60-9032	Distance rings, 1¼", pk 6
60-9033	Distance rings, 25mm, pk 6

Specimen Holders for Single Force (cont.)

Part No.	Description
60-9034	Distance rings, 30mm, pk 6
60-9050	Specimen Holder, single force, 27mm x 46mm glass slide for use with 60-9010 specimen holder

Accessories	
Part No.	Description
30-2008	Paper Holding Band, for 8" (203mm) diameter platens
40-0500	10" (254mm) Aluminum Platen
40-2058	Cloth Clamp, for 8" (203mm) Platen
40-2800	PriMet® 3000 Modular Dispensing System
40-2810	PriMet® Modular Dispensing Satellite
40-4061	8" (203mm) Aluminum Platen
49-2500	EnvironMet™ Recirculating Filter System
49-2501	EnvironMet™ Filter System
49-6111	Recirculating System with cart, 24 gallon (91ℓ) Reservoir
60-2410	Specimen Loading Fixture with Loading Plate
60-2411	Specimen Loading Plate for 8" (203mm) and 10" (254mm) Specimen Holders
60-9080	Disposable Liner, pk 5 (replacement)
60-9090	Air Filter/Regulator
60-9091	Water Filter (replacement)
95-2825	Paper Holding Band, for 10" (254mm) diameter platens
95-2826	Cloth Clamp, for 10" (254mm) Platen

For additional selections of specimen holders, consumables and other accessories, refer to the Buehler Equipment Buyers Guide or Consumables Buyers Guide, or contact your local Buehler Sales Engineer.

Buehler continuously makes product improvements; therefore, technical specifications are subject to change without notice.

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