

BUEHLER®

MetaServ® 250 SINGLE & TWIN GRINDER-POLISHERS, Vector® & Vector® LC 250 POWER HEADS

- Reliable
- Versatile
- Quiet
- Upgradable
- Single or Twin Platen Option
- Long Life Base



Reliable and Economical Family of Grinder-Polishers



MetaServ® 250 Features

The MetaServ® 250 single and twin grinder-polishers offer a combination of performance, economy and reliability for most microstructural analysis applications. Designed for manual grinding and polishing, as well as for semiautomatic operation when combined with a Vector® or Vector® LC 250 Power Head.

The MetaServ® 250 features variable speed control from 50 to 500 rpm. A built-in bowl wash and drain flush out particles and minimizes build-up of grinding-polishing debris. The

adjustable water flow nozzle can be positioned anywhere over the platen and the flow control valve governs the amount of water dispensed. The aluminum platen offers a flat, hard grinding-polishing surface for most medias. A molded protective housing provides corrosion and impact-resistance. The removable bowl splash guard prevents accidental spraying and can be removed for easy platen changing.

The easy-to-use front control panel consists of power on/off, platen run/pause, digital up/down timer

with reset, water on/off/run-active control, variable platen speed control knob and an emergency stop button. A bright LED indicator clearly displays when power is on. Safety features include built-in circuit protection, low voltage controls and a large emergency stop button.

Single or Twin Platens

The MetaServ® 250 is available in either a single or twin platen model. The single platen model can be used in either a manual operational mode, or semi-automatic mode with the addition of the Vector LC 250 or Vector Power Heads. The MetaServ® 250 Twin Grinder-Polisher offers twin platens which are both simultaneously controlled and operated at the same time. The MetaServ® Twin can be used in either manual operational mode, or semi-automatic mode with the addition of the Vector® LC 250 Power Head (not compatible with the Vector Power Head).

Vector® LC 250 Features

The Vector® LC 250 Power Head upgrades the MetaServ® 250 Grinder-Polishers from manual to semi-automatic operation, increasing specimen consistency.

The Vector® LC 250 Power Head is an easy to operate, economical power head with basic features for low volume applications. Single sample pressure prepares one to four samples and allows pressure to be tailored for each sample. It has mechanical sample loading and head positioning which does not require the use of air pressure. The front control panel features simple to operate controls including an analog pressure setting display and power switch.

Vector® Features

The Vector® Power Head upgrades the MetaServ® 250 single platen Grinder-Polisher to semi-automatic operation featuring both single and central force. Single force application provides preparation flexibility, while central force application provides superior flatness results. Other features include a digital timer,

digital force control, complimentary or contra rotation, water control and PriMet® dispensing on/off control. The vector is compatible with the MetaServ® single platen only, not dual platen.

PriMet® Abrasive Dispensing System

Connect the MetaServ® Grinder-Polishers to the optional PriMet® Modular Dispensing Satellite for semi-automatic abrasive suspension dispensing during preparation steps. The PriMet® Modular Dispensing Satellite uses peristaltic pumps, non mist technology, to distribute lubricant, diamond and colloidal polishing suspension to the platen. Controlled dispensing offers repeatable results regardless of the operator.



MetaServ® 250 Twin is designed for quick 2-step manual grinding-polishing.



The MetaServ® 250 Grinder-Polisher, is designed for manual grinding-polishing applications.



The Vector® LC Power Head is an economical option to convert the MetaServ® 250 Twin Grinder-Polisher into a semi-automatic single force preparation system.



The Vector® LC 250 Power Head is an economical option to convert the MetaServ® 250 Grinder-Polisher into a semi-automatic single force preparation system.



The Vector® LC 250 Power Head features mechanical single sample preparation from one to four samples.



The Vector® Power Head provide single and central force semi-automatic systems.



The MetaServ® 250 front control panel features power on/off, blue LED power on indicator, platen run/pause, digital up/down timer with reset, water on/off/run-active control, variable platen speed control knob and an emergency stop button.



The Vector® front control panel features easy to read icons that guide you quickly through the programming process.



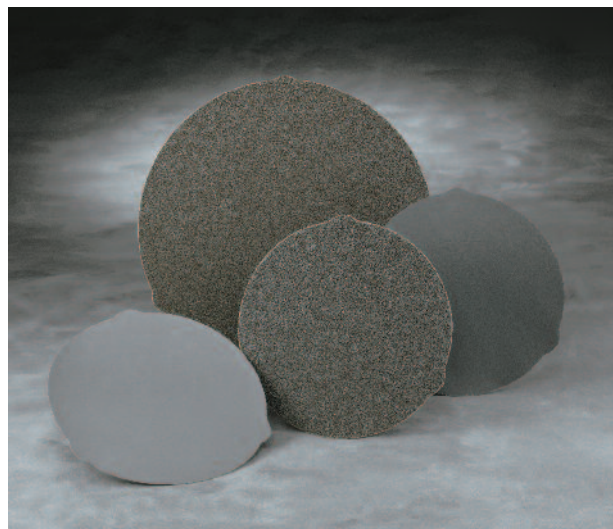
The power head is easily moved to the side or positioned on the platen edge and locked in place.



The bowl cover and hex wrench are conveniently stored at back of the machine when not in use.



Single force specimen holders are available for use with 1" - 1½" (25mm - 40mm) diameter samples.



Plain and PSA backed discs are available for the MetaServ® 250 Grinder-Polisher.



PriMet® Dispensing Satellite with MetaServ Grinder-Polisher.



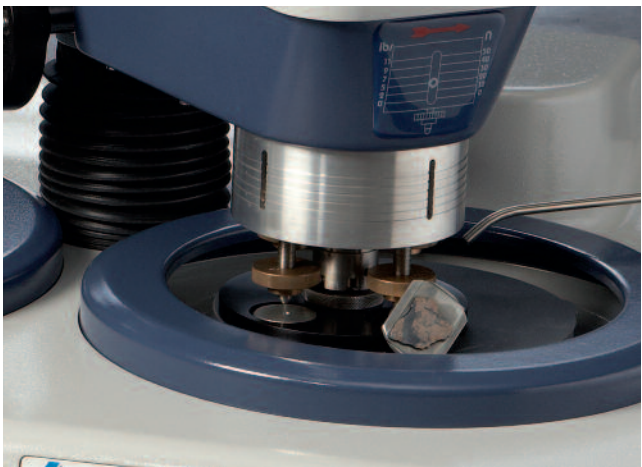
Vector® LC 250 Single force specimen holders allow for preparation flexibility of 1 to 4 samples



Vector® central force specimen holders provide superior flatness results.



Vector® 27 x 46mm glass slide holder system



Vector® LC 27 x 46mm glass slide holder system

MetaServ® 250 Grinder-Polisher

Power:

115/230 VAC, 50/60 Hz, 1-phase

Platen Diameter:

8" (203mm) or 10" (254mm)

Platen Speed:

50 to 500 rpm, continuously variable

Controls:

Power on/off, platen on/off, water, platen speed, time, e-stop

Motor:

¼ Hp (200 Watt)

Water Supply Pressure:

14-28 psi (1-2 bar)

Water Supply Flow:

0.5 gallon/min. (2 liters/min.)

Ambient Operating:

Temperature: 40-104 °F (5-40° C)

Humidity: 30-90% Relative Humidity

Approval Standards:

CE Marked, EC Applicable Directives

Weight:

119 lbs (54 kg)

Dimensions:

Width	Depth	Height
Single Platen		
18" (452mm)	29" (735mm)	9½" (242mm)
Twin Platen		
30" (760mm)	28" (710mm)	8" (200mm)

Vector® LC 250 Power Head

Power:

115/230 VAC, 50/60 Hz, 1-phase

Head Speed:

60 rpm

Sample Force:

0 to 11 lbs (0 to 50 N) per sample

Sample Sizes:

1", 1¼", 1½", 25mm, 30mm, 40mm

Sample Capacity:

1 to 4

Vector® LC 250 Power Head (cont.)

Ambient Operating:

Temperature: 40-104 °F (5-40° C)

Humidity: 30-90% Relative Humidity

Approval Standards:

CE Marked, EC Applicable Directives

Weight:

55 lbs (26kg)

Dimensions:

Width	Depth	Height
7½" (190mm)	15" (381mm)	16" (406mm)

Vector® Power Head

Power:

85-265 VAC, 50/60 Hz, 1 phase

Head Speed:

60 rpm

Air Supply:

55-85 psi (3.8-5.8 bar)

Sample Force:

Single: 0-15 lbs (0-75N)

Central: 4-60 lbs (20-300N)

Sample Sizes:

1", 1¼", 1½", 25mm, 30mm, 40mm

Ambient Operating:

Temperature: 40-104 °F (5-40° C)

Humidity: 30-90% Relative Humidity

Dimensions:

Width	Depth	Height
8½" (216mm)	16" (406mm)	13½" (343mm)

Approval Standards:

CE Marked, EC Applicable Directives

Weight:

28 lbs (13kg)

Ordering Information

MetaServ® 250 Grinder-Polishers

All MetaServ® 250 Grinder-Polishers include splash rings, bowl covers, electrical power cord and operating instructions. Aluminum platens, paper holding bands and cloth clamps sold separately.

49-10055 8"/10" (203/254mm) MetaServ® 250 Grinder-Polisher Base, Single Platen

49-10057 8"/10" (203/254mm) MetaServ® 250 Twin Grinder-Polisher, Twin Platen

Vector® LC 250 Power Head

Vector LC 250 Power Head includes an electrical power cord and operating instructions. Specimen holders sold separately.

60-10059-115 Vector LC 250 Power Head, 115 VAC, 50/60 Hz, 1 phase

60-10059-230 Vector LC 250 Power Head, 230 VAC, 50/60 Hz, 1 phase

Vector® Power Head (Compatible with MetaServ® 250 single only)

Vector Power Head includes electrical power cord and operating instructions.

60-1990 Vector Power Head, 85-265 VAC, 50/60 Hz, 1 phase (*Connection Kit, 60-10066, required to connect power head to base*)

60-10066 Vector to MetaServ® 250 Connection Kit - *Required (Must be factory or service technician installed)*

Accessories

Platens

40-4061 Platen, 8" (203mm), Aluminum

40-0500 Platen, 10" (254mm), Aluminum

49-1777 Platen, 12" (305mm), Aluminum, For manual base only applications

Vector® LC 250 Single Force Specimen Holders:

60-9005 Drive Adapter (Required)

60-10060 4 x 1" (25mm) samples

60-10061 4 x 1¼" (32mm) samples

60-10062 4 x 1½" (38mm) samples

69-1583 1" x 2" Slide Holder (60-10062 required)

60-10063 4 x 25mm samples

60-10064 4 x 30mm samples

60-10065 4 x 40mm samples

60-3007 Retaining Rings (set of 12 in assorted sizes)

Note: Drive adapter not included

Vector® Single Force Specimen Holders with Retaining Rings and Drive Adapter:

60-3001 4 x 1" (25mm) samples

60-3002 4 x 1¼" (32mm) samples

60-3003 4 x 1½" (38mm) samples

60-3004 4 x 25mm samples

60-3005 4 x 30mm samples

60-3006 4 x 40mm samples

60-3007 Retaining Rings (set of 12 in assorted sizes)

69-1584 Glass Slide Holder, 27 x 46mm (60-3000 required)

60-3000 Specimen Holder, accommodate 69-1584 glass slide holder

Vector® Central Force Specimen Holders:

60-2482 6 x 1" (25mm) samples

60-2483 6 x 1¼" (32mm) samples

60-2485 3 x 1½" (38mm) samples

60-2486 6 x 30mm samples

60-2487 3 x 40mm samples

60-2408 Blank Holder

60-2499 Drive Adaptor for Central Force Specimen Holders

60-2411 Loading Plate

Note: One drive adaptor and loading plate required for each central force specimen holder

Other Accessories:

30-2008 Paper Holding Band, 8" (203mm)

95-2825 Paper Holding Band, 10" (254mm)

40-2058 Cloth Clamp, 8" (203mm)

95-2826 Cloth Clamp, 10" (254mm)

For a complete listing of Buehler consumable supplies, please refer to our Consumables Buyers Guide.

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

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