



**E-Prep 4™**  
GRINDING / POLISHING SYSTEM

*INTUITIVE, POWERFUL & RELIABLE  
SYSTEM FOR SEMIAUTOMATIC  
SAMPLE PREPARATION*

The **E-Prep 4™** grinding and polishing machine, with the **PH-4i™** power head, is a simple yet powerful system for semiautomatic operation, ideal for low to high volume sample preparation requirements. The user-friendly manual and touchpad interface makes it easy to adjust settings and operate. Basic controls allow quick changes to parameters such as sample force, cycle time, platen speed and sample speed.

Either standard or magnetic 8"/203 mm or 10"/254 mm platens may be used with any plain/adhesive backed or magnetic system disc.

**Durable:** Engineered and constructed using precision machined, hard-anodized aluminum and stainless steel components to provide maximum longevity.

**Easy to Use:** Straightforward controls and user-friendly functions allow quick, easy, repeatable operation.

**Standard/magnetic platens and sample holders are sold separately.**



*E-Prep 4™ / PH-4i™ System (shown w/ 8" platen)*

Item	Description
5-2400	E-Prep 4™ / PH-4i™, 100-240 V

### Features:

- Manual and touchpad switches to control key functions
- Sturdy RIM, aluminum and stainless steel construction
- Powerful 0.5 HP (375 W) high torque DC motor
- Selectable platen speeds: 150, 300 and 600 RPM
- Variable cycle time: 30, 60 and 90 seconds; 2-9 minutes (1 minute increments)
- Quick-change platen design, anodized to resist wear and corrosion
- Molded one-piece corrosion and impact resistant enclosure with overflow diversion to protect internal components
- Adjustable, manual force control
- Electronic coolant control with adjustable flow control valve
- Retractable coolant nozzle that allows quick and easy sample/bowl cleaning
- Emergency shut-off switch
- CE compliant for EU
- Two (2) year warranty
- Designed and manufactured by Allied in the USA 

### Intuitive User Interface



An intuitive user interface with user-friendly touchpad controls makes the E-Prep 4™ system easy to use and program. The microprocessor based system allows platen speed, sample rotation speed, cycle time and water to be controlled.



Retractable coolant nozzle allows quick and easy sample/bowl cleaning.



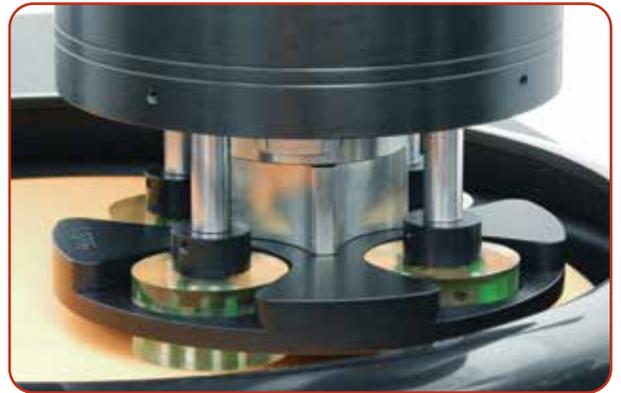
Unique tilt-up feature allows easy access to platen and holder.

## PH-4i™ Power Head

The **PH-4i™** power head offers excellent versatility for low to high volume semiautomatic sample preparation, using individual force mode. The pneumatic system provides controlled sample force and allows between one and four samples up to 2" (51 mm) diameter to be prepared simultaneously. The unique tilt-up design provides easy, unhindered access to the sample holder and platen, and eliminates the need to reposition the head during the preparation procedure.

### Features:

- Pneumatic system to control sample force
- Individual force sample preparation of up to 4 mounts
- Pneumatically applied (manually adjustable) sample force: 0-12 lb. in 1 lb. increments (0-60 N in ~ 5 N increments)
- Holders available for standard mounts up to 2"/51 mm diameter
- Simple push-button attachment and removal of sample holders
- 0.25 HP (190 W) motor with durable reduction gearbox that provides constant high-torque output
- Unique tilt-up power head for easy access to sample holder and platen
- Three (3) rotation speeds: 50, 100 and 150 RPM
- Quick-lock power head adjustment and easy sample holder positioning across entire platen surface
- Complementary rotation



PH-4i™ individual force configuration: four (4) individual pistons apply force to each mount (1.5" mounts shown).



Simple push-button allows easy attachment and removal of sample holders.

## Individual Force Holders

Individual force holders allow one or more samples to be prepared simultaneously. The advantage of individual preparation is that it allows removal of any number of samples from the grinding/polishing operation without affecting balance of the system. It is also ideal for applications where small geometry and site-specific cross-section requirements make alignment of more than three (3) samples to a common plane extremely challenging.

### Single Diameter Mount



Mount Diameter	PH-4i™ (4 position)
1" / 25 mm	5-3735
30 mm	5-3740
1.25"	5-3745
1.5"	5-3750
40 mm	5-3755
50 mm	5-3760
2"	5-3765

### Variable Diameter Mount

This individual force holder utilizes spacer rings for specific diameter mounts. Rings can be mixed or matched for maximum versatility. **Rings are sold separately.**



Holder	PH-4i™ (4 position)
	<b>5-3700</b>
1" / 25 mm Ring	5-3X35-50
30 mm Ring	5-3X40-50
1.25" Ring	5-3X45-50
1.5" Ring	5-3X50-50
40 mm Ring	5-3X55-50

## Platen Storage Cabinet



*Cabinet shown with door removed for visual clarity*

This durable aluminum cabinet accommodates up to 10 aluminum trays/shelves (reversible) for storage of platens, discs or cloths up to 12" (305 mm) diameter. The hinged, clear plastic door with magnetic lock prevents dust contamination. Five (5) trays are included.

Item	Description
5-8100	Platen Storage Cabinet
	Dims: 14" W x 14" D x 14" H (355 x 355 x 355 mm) Weight: 35 lb. (16 kg)
Item	Description
5-8105	Aluminum Tray / Shelf

## Mount Storage Cabinet



*Cabinet shown with door removed for visual clarity*

This cabinet provides storage for polished mounts to prevent corrosion and dust contamination. The 10 cloth-lined drawers absorb moisture and hold mount dividers for easy organization. The locking door provides a sealed environment. A rechargeable desiccant canister is included. **Dividers are sold separately.**

Item	Description
30-8000	Mount Storage Cabinet
	Dims: 19" W x 19" D x 19" H (483 x 483 x 483 mm) Weight: 85 lb. (39 kg)
Item	Description
30-8005	Mount Divider, (144) 1" or 25 mm diameter
30-8010	Mount Divider, (100) 1.25" or 30 mm diameter
30-8015	Mount Divider, (61) 1.5" or 40 mm diameter
30-8020	Mount Divider, (36) 2" or 50 mm diameter

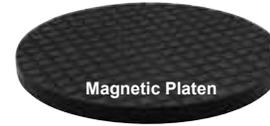
## Standard Platens



Standard aluminum platens are precision lapped parallel, then hard anodized for maximum wear resistance. They are used with adhesive backed discs, double sided adhesive discs and paper holding bands, or when converting to a magnetic platen using magnetic bases.

Item	Description
5-2005	8" (203 mm)
5-6010	10" (254 mm)

## Magnetic Platens



Magnetic platens combine a standard aluminum platen with a cross-hatched magnetic surface for maximum flatness and adherence. Only one platen is needed throughout the grinding and polishing process, allowing all magnetic system cloths/abrasive discs or ferromagnetic discs to be utilized.

Item	Description
5-2005M	8" (203 mm)
5-6010M	10" (254 mm)

## Disc Holding Bands



Disc holding bands are made of anodized aluminum and secure plain back discs to a standard platen. A protrusion around the top of the band allows variable sized discs ( $\pm 3$  mm) to be secured.

Item	Description
125-10011	8" (203 mm)
125-10012	10" (254 mm)

## Ferromagnetic Support Discs



These reusable ferromagnetic stainless steel discs feature a nonslip backing and allow adhesive backed cloths/abrasive discs to be changed quickly and easily when using magnetic platens.

Item	Description
55-51000	8" (203 mm)
55-51002	10" (254 mm)

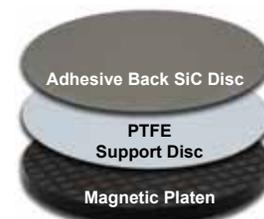
## Double Sided Adhesive Discs (Pk/10)



Double sided adhesive discs are adhered to a standard platen and used to secure plain back silicon carbide abrasive discs. Each provides 25-75 disc pulls depending on grit size, cycle time and force.

Item	Description
52-10005	8" (203 mm)
52-10003	10" (254 mm)

## PTFE Ferromagnetic Support Discs



These reusable, durable discs combine a PTFE surface with a ferromagnetic stainless steel substrate. This allows adhesive backed abrasive discs/polishing cloths to be easily removed after use without any adhesive transfer. The nonslip backing keeps the disc in place even for coarse grinding applications.

Item	Description
55-52000	8" (203 mm)
55-52002	10" (254 mm)

## AD-5™ Fluid Dispenser

The **AD-5™** fluid dispenser provides automatic, unattended application of abrasive polishing suspensions and lubricants. All functions are programmed using the touchpad switches on its faceplate. Intuitive menu navigation and simple logic programming make the dispenser easy to use.

Timed, volume-controlled, variable frequency dispensing delivers reproducible results by eliminating inconsistencies between operators. This increases productivity and efficiency, while reducing consumables usage.

The AD-5™ features five (5) dispensing positions, two of which include a flush cycle to prevent clogging when using colloidal suspensions. Peristaltic pump technology offers mist-free drip delivery to the polishing surface.

**The AD-5™ is used with the E-Prep 4™ as a standalone system.**

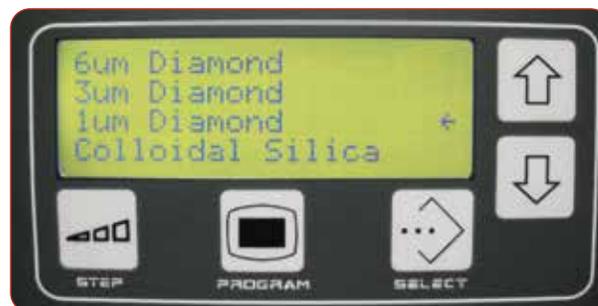
### Features:

- Five (5) dispensing positions, 16 oz. (500 mL) capacity; 128 oz. (3.8 L) adapter kit available
- User-defined menu labeling (abrasive type & size, lubricant, cloth, material, and menu name)
- Pump reverse after cycle to prevent dripping/contamination
- Local function to allow standalone operation with any grinder/polisher
- Pulse duration: 0.5-6 seconds (0.5 second increments)
- Pulse frequency: 1-10 per minute
- In-cycle priming that allows temporary “full rate” dispensing onto polishing surface
- One-touch priming function for quick, initial charging of new cloths
- One-touch activation independent of menu for simple operation
- Pre-start charging of new/dry polishing cloths
- Allows dispensing of colloidal suspensions (silica, silica/alumina and alumina) with rinse flush function to avoid clogging
- Two (2) positions with high-speed pumps for oxide polishing
- 25 programmable menus
- Touchpad switches to control all functions
- Backlit 4-line LCD
- CE compliant for EU
- Two (2) year warranty
- Designed & manufactured by Allied in the USA 



*E-Prep 4™ / PH-4i™ System with AD-5™ Fluid Dispenser*

Item	Description
5-7100	AD-5™, 100-240 V
	Dims: 8" W x 25" D x 9" H (203 x 635 x 228 mm)
	Weight: 28 lb. (13 kg)

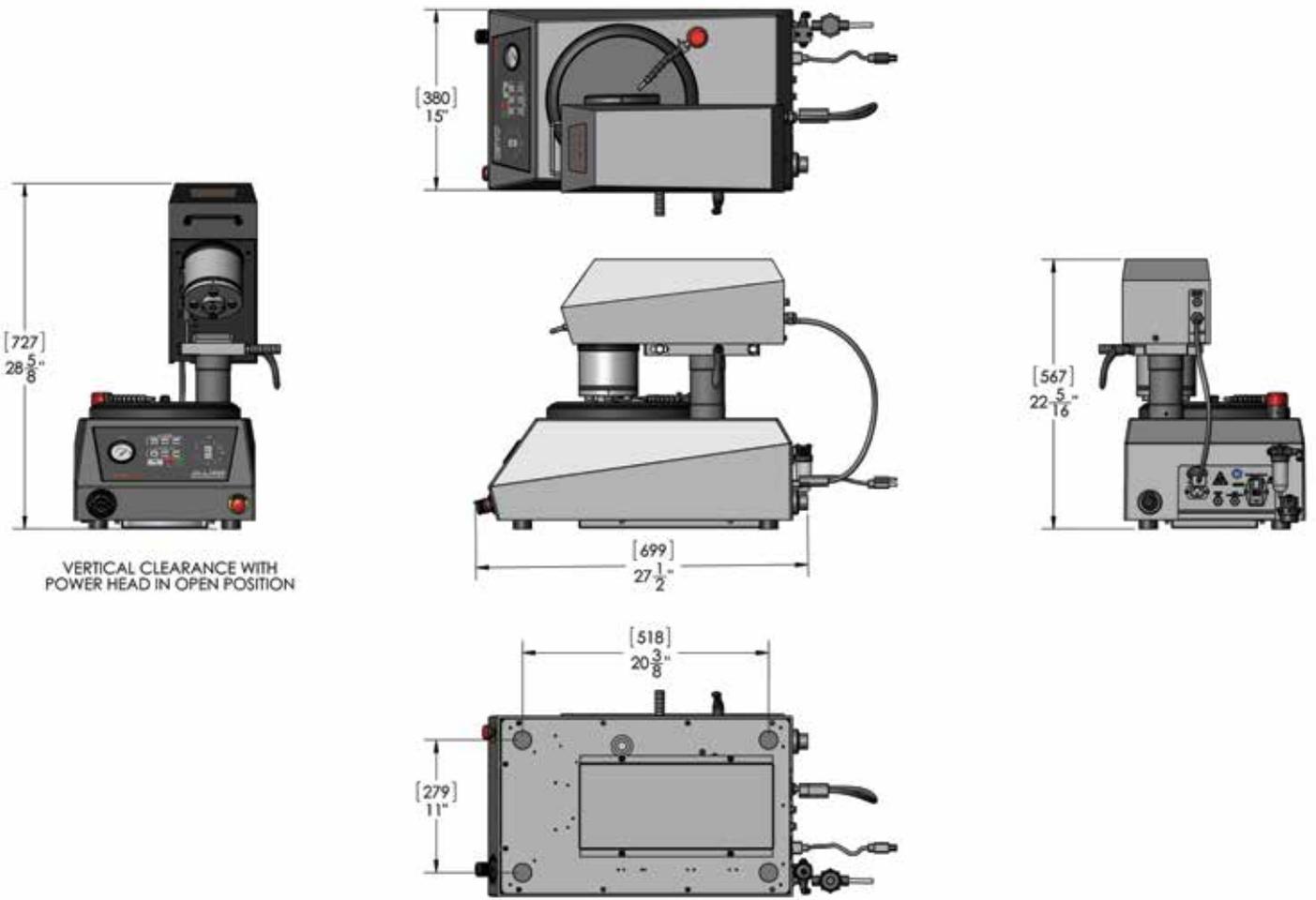


*25 programmable menus*



*Convenient pivoting arm with nozzle design featuring stainless tips that are easily removed for cleaning.*

# Dimensions



VERTICAL CLEARANCE WITH POWER HEAD IN OPEN POSITION

Grinder/Polisher Specifications	
<b>Voltage</b>	100-240
<b>Platen RPM</b>	150, 300, 600
<b>Power (HP)</b>	0.5
<b>Power (W)</b>	375

Power Head Specifications	
<b>RPM</b>	50, 100, 150
<b>Power (HP)</b>	0.25
<b>Power (W)</b>	190
<b>No. of Samples</b>	1-4
<b>Force (LbF)</b>	0-12
<b>Force (N)</b>	0-60
<b>Mount Size Capacity</b>	2" (51 mm)

# Global Distribution of the World's Finest Products



Brochure #: EP4-2017

Equipment is subject to change due to innovations/improvements at any time.



Designed and Manufactured by  
Allied High Tech Products, Inc.  
in the USA

**ALLIED**  
HIGH TECH PRODUCTS, INC.

2376 E. Pacifica Place, Rancho Dominguez, CA 90220  
310.635.2466 Worldwide / 800.675.1118 U.S. & Canada  
Visit us online! [AlliedHighTech.com](http://AlliedHighTech.com)