

**Mikrosize®**

# uPoli-3-250A

**Three-Platen Automatic Metallographic  
Grinder-Polisher**



## Contact us

**Mikrosize Precision Instrument Co.,Ltd**

A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.

Web: [www.mikrosize.com](http://www.mikrosize.com)

Email: [mikrosize@mikrosize.com](mailto:mikrosize@mikrosize.com)



Web: [www.mikrosize.com](http://www.mikrosize.com)

Email: [mikrosize@mikrosize.com](mailto:mikrosize@mikrosize.com)

## Feature and Application

### Product Feature

- Equipped with three grinding and polishing platens, enabling multi-step grinding and polishing in one operation.
- Specimen holder oscillates left and right over the platen to maximize grinding and polishing efficiency.
- Single-point loading and central loading are available (optional).
- Three operating modes: fully automatic mode, multi-step mode, and multi-program mode.
- 1kW high-power servo motor controlled by PLC, providing high and constant torque at any speed.
- Wide speed adjustment range: 0–1000 rpm (max. 1500 rpm).
- Supports forward and reverse rotation, switchable at any time.
- Touch-screen interface for easy parameter setting.
- Speed, polishing time, water valve and other parameters can be set; programs can be saved for direct recall next use.
- Automatic dispenser is optional.
- Magnetic anti-stick plate for easy replacement and multi-purpose use.
- Interface supports Chinese and English switching.
- Loading force can be adjusted during operation for flexibility and convenience.
- Precise control of material removal (optional).

### Product Application

- Metallographic analysis and failure analysis;
- Semiconductor industry: wafer thinning and polishing;
- Mold processing and optimization;
- Precision processing of metal components.

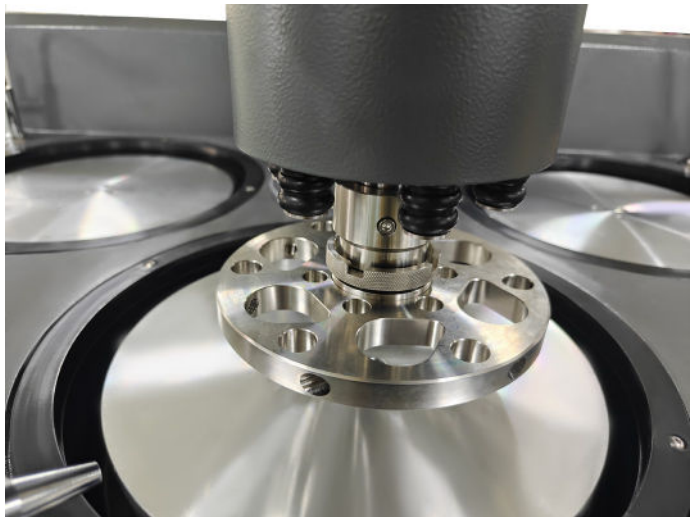


## Product Details



- Adjustable air pressure valve: regulates pressure applied to the specimen by adjusting air pressure.

- Quick-change design.
- Supports two loading methods: single-point loading and central loading.



- Equipped with a mounting table for use with central specimen holders, ensuring specimens are mounted on a level plane.

## Product Details



**1. Air Pressure Regulating Valve**

**2. Display Screen**

**3. Grinding Head**

**4. Holder**

**5. Platen**

**6. Water Tap**

**7. Emergency Stop Button**



**1. Signal Adapter Cable**

**2. Power Cord**

**3. Power Adapter Cable**

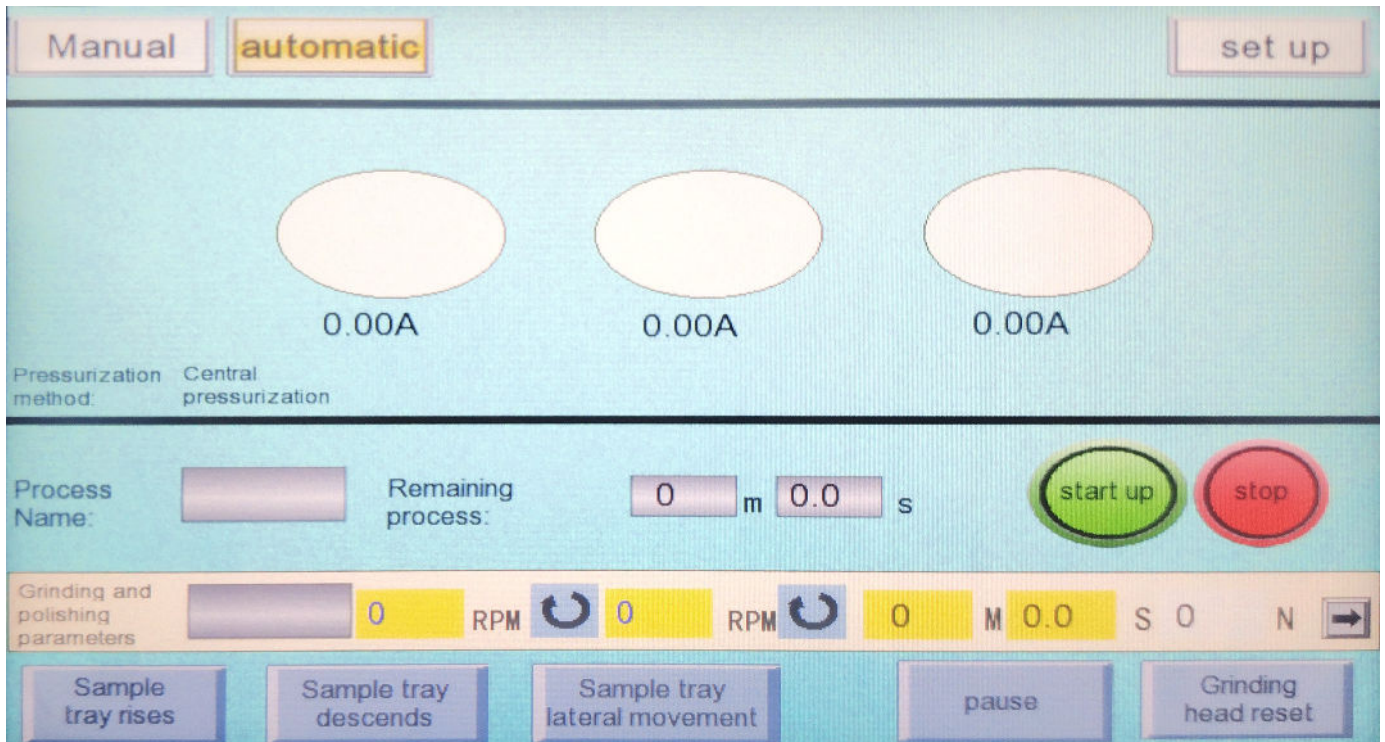
**4. Signal Cable**

**5. Air Filter**

**6. Air Switch**

## Screen Interface

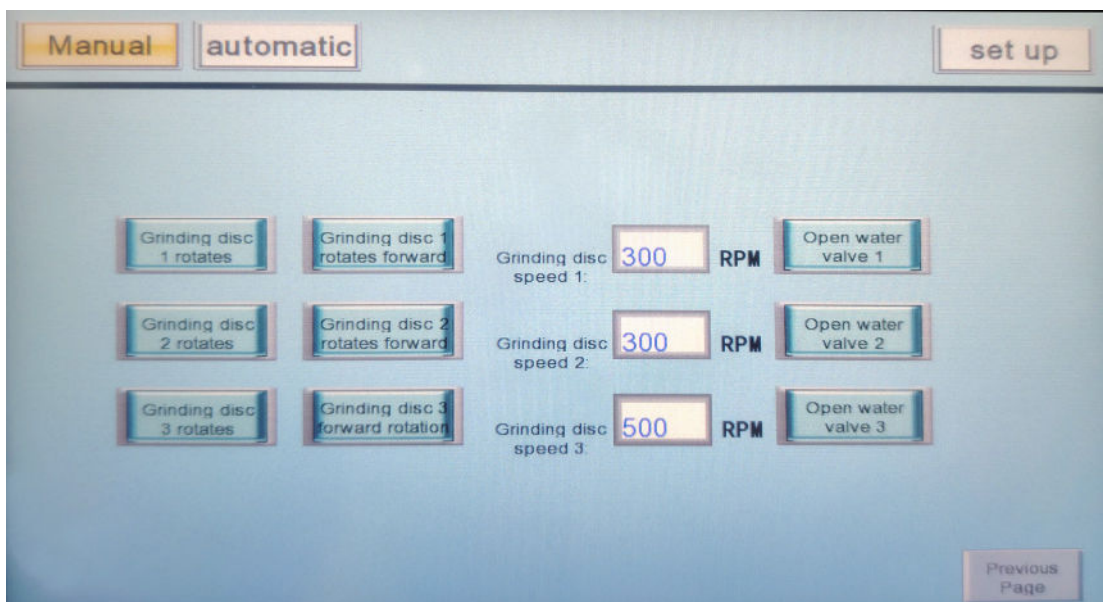
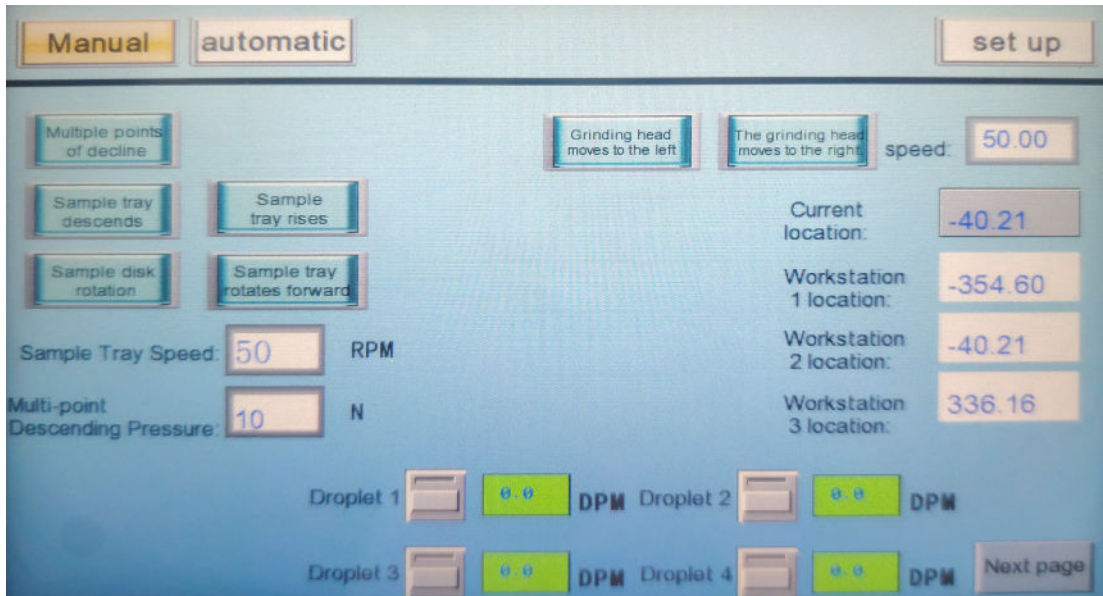
### Automatic Mode



- Displays current platen status.
- Shows loading mode: multi-point loading and central loading.
- Current program step and remaining time.
- Controls start and stop of the machine.
- Controls movement and lifting of the specimen holder.

## Screen Interface

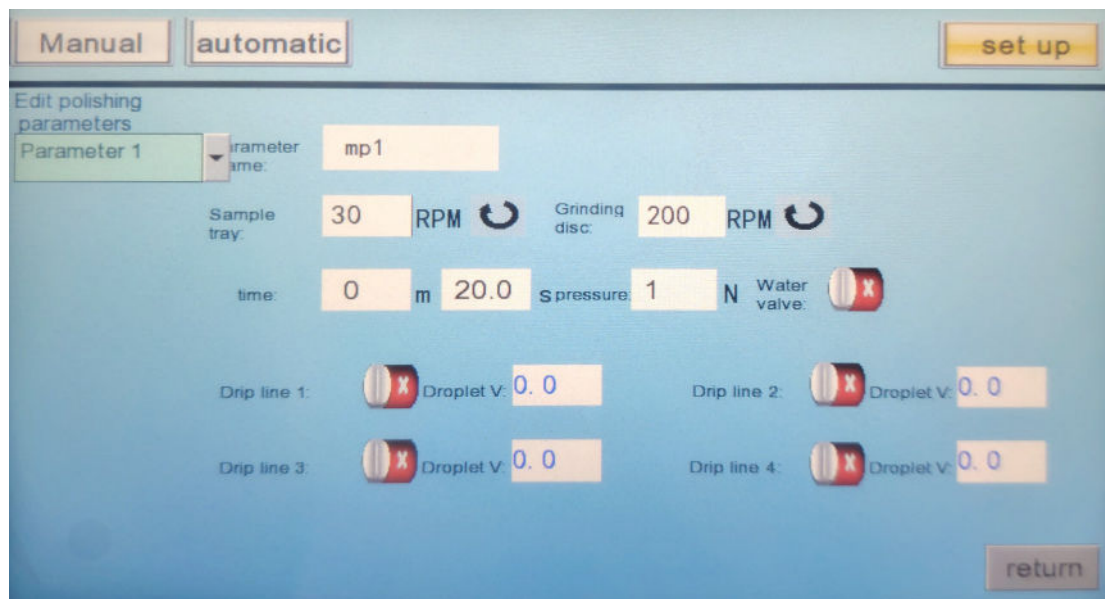
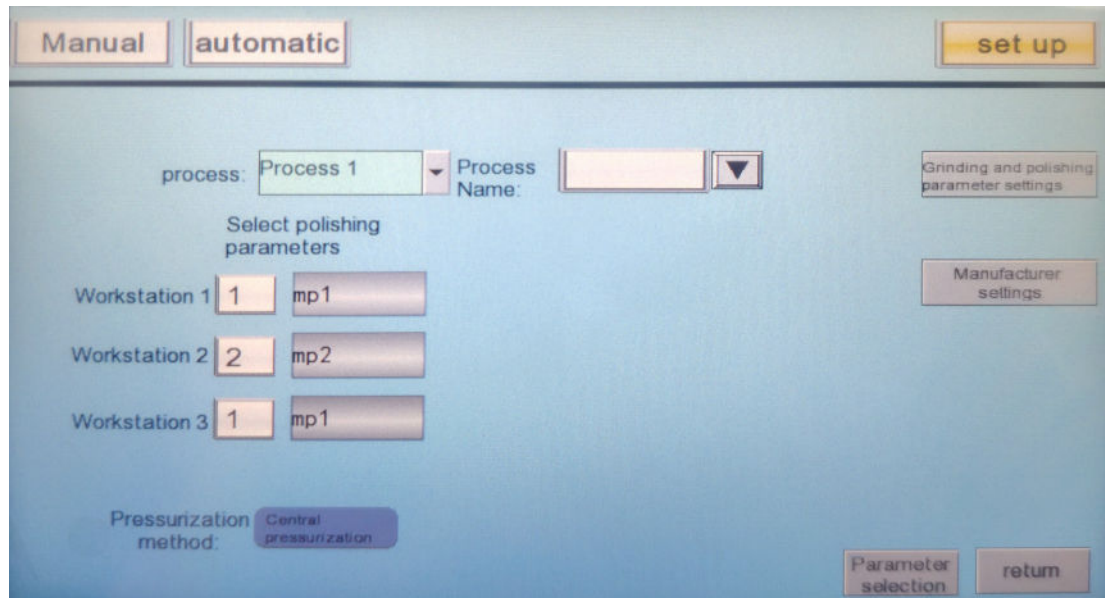
### Manual Mode



- Controls movement and lifting of the specimen holder.
- Controls lifting, rotation speed and direction of the specimen holder.
- Controls left-right movement and speed of the grinding head.
- Sets station positions.
- Controls the dispenser.
- Sets platen forward/reverse, rotation speed and water valve on/off.

## Screen Interface

### Setting Interface




- Supports parameter setting for multi-program and multi-station operations.
- Select loading mode: multi-point loading or central loading.
- Tap "Apply Parameters" to send settings to the PLC.
- Edit detailed grinding/polishing parameters: specimen holder speed and direction; polishing time; loading pressure; water valve; dispenser control.



# Technical Specification

<b>Item</b>	Three-Platen Automatic Metallographic Grinder-Polisher
<b>Model</b>	uPoli-3-250A
<b>Stations</b>	3
<b>Platen diameter</b>	Standard $\phi$ 254 mm (optional $\phi$ 230 mm, $\phi$ 203 mm) with magnetic conversion system
<b>Platen speed</b>	50–1500 rpm, forward/reverse switchable
<b>Specimen holder speed</b>	30–200 rpm, forward/reverse switchable
<b>Central loading force</b>	30~200N
<b>Preparation time</b>	0~9999s
<b>Automatic mode</b>	99 groups of parameters, each independently set and recalled
<b>Multi-step mode</b>	99 programs, each with 3 step parameters
<b>Specimen holder</b>	Standard $\phi$ 30 mm 6-hole (optional $\phi$ 20 mm 6-hole, $\phi$ 40 mm 6-hole, $\phi$ 50 mm 3-hole; others customizable)
<b>Noise</b>	50.5–56 dB at 1 m
<b>Working air pressure</b>	$\geq$ 0.6 MPa
<b>Motor power</b>	1kw*3
<b>Power supply</b>	AC 220V, 50/60Hz, 3.3kw
<b>Dimensions</b>	980*960*825mm
<b>Weight</b>	231kg

## Standard Delivery

Name	Qty	Photo
<b>Mainframe</b>	1 set	
<b>φ250 mm PSA Sandpaper: P180, P320, P600, P1000, P2000</b>	10 sheets each	/
<b>φ250 mm PSA Polishing Cloth: Flannel, Satin</b>	2 sheets each	/
<b>200 ml Diamond Suspension Polishing fluid: 1 μm, 3 μm, 6 μm</b>	1 bottle each	/
<b>1000 MI Blue Polishing Lubricant Coolant</b>	1 bottle	/
<b>φ250 mm Anti-stick Plate</b>	2 sheets	/
<b>Magnetic Platen</b>	2 sheets	/
<b>Power Adapter Cable</b>	1 pc	/
<b>Data Adapter Cable</b>	1 pc	/


## Standard Delivery

Name	Qty	Photo
Central Holder	1 set	/
Single-Point Holder	1 set	
Mounting Table	1 pc	
4 mm Hex key With Handle	1 pc	/
5 mm Hex Key	1 pc	/
2.5 mm Hex Key	1 pc	/
2.5 mm Hex Key	1 pc	/
Waterproof Ring	3 pcs	/
φ8 mm Inlet Hose	1 pc	/

## Standard Delivery

Name	Qty	Photo
φ32 mm drain hose	1 pc	/
6 mm × 3 m air tube	1 pc	/
PTFE tape	1 roll	/
Touch pen	1 pc	/
Coat hook	1 pc	/
G1/2 angle valve	1 pc	/
G1/2 rubber gasket with strainer (80 mesh)	1 pc	/
Quick-fitting connector	3 pcs	/

## Standard Delivery

Name	Qty	Photo
Pre-Filter	1 pc	/
8–6 Reducer Air Connector	1 pc	/
Cleaning Brush	1 pc	/
Hose Clamp 21–44	1 pc	/
Anti-stick Plate Crowbar	1 pc	/
User Manual	1 copy	
Certificate of Conformity	1 copy	
Warranty Card	1 copy	