



**BANBROS ENGINEERING PVT. LTD.**

The Precision Measurement People

# AUTOMATIC METALLOGRAPHIC SPECIMEN GRINDING & POLISHING MACHINE

- *VALUE*
- *VERSATILITY*
- *PERFORMANCE*

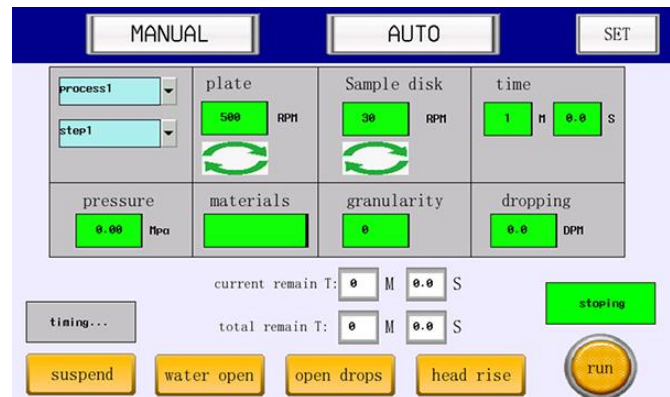


**BUTOPOL-1000**



**FEATURE:**

- Multi-usage, one machine to complete the whole process of metallographic rough grinding, fine grinding, rough polishing and fine polishing.
- Single point pneumatic holding, no need for sample clamping.
- Six pieces of  $\Phi 30\text{mm}$  samples can be polished simultaneously.
- PLC independent control for the grinding disc and grinding head. The grinding & polishing parameters like rotation speed, grinding & polishing time, rotation direction, water valve on/off etc. can be set and automatically saved, easy to call.
- Large touch screen interface, convenient for parameter setting, intuitive state display and easy operation.
- Stepless speed changing for both grinding disc and grinding head. The rotation direction is switchable between FWD & REV.
- PLC control for water supply and grinding material dispenser.
- Working mode:
  - (1) Automatic mode: According to the sample materials user's habits, 30 groups of processes can be set and called. Each process can contain 10 steps of process parameters (each process is corresponding to certain grinding or polishing process. Process parameters: rotation speed of grinding disc and polishing head, grinding and polishing time, etc.)
  - (2) Manual mode: According to each grinding and polishing process, 30 groups of process parameters can be set and called: grinding disc and polishing head rotation speed, grinding and polishing time, water supply on/off etc.
  - (3) Setting mode: Set certain function of equipment separately.
- Magnetic anti-sticky disc can be replaced easily and it can finish the rough grinding, fine grinding, rough polishing and fine polishing for various samples continuously.
- The water supply can be controlled by electromagnetic valve. There is automatic water cleaning device under grinding disc and it can clean the inside wall automatically.
- Grinding head automatic electromagnetic lock, no need for manual locking handle.
- Multi-language interface is available.
- High accuracy, stable running, low noise.
- Grinding & polishing dispenser is optional.
- Operation by mobile remote control device is optional.



**TECHNICAL SPECIFICATIONS:**

<b>Model No.</b>	<b>BUTOPOL-1000</b>
<b>Magnetic grinding disc diameter</b>	250mm (optional 200mm, 230mm)
<b>Sample holder</b>	6-hole, $\Phi$ 30mm ( $\Phi$ 20mm, or 3-hole, $\Phi$ 40- $\Phi$ 50mm is optional)
<b>Grinding disc rotation speed</b>	100-1000 rpm, FWD & REV rotation directions can be switched
<b>Grinding head rotation speed</b>	30-200 rpm, FWD & REV rotation directions can be switched
<b>Manual mode</b>	Manual mode
<b>Automatic mode</b>	30 groups of process parameters, and each group of process includes 10 steps of procedure parameters (automatic processing from step 1 to step 10, each step has its independent group of procedure parameters).
<b>Grinding head locking method</b>	Electromagnetic automatic locking
<b>Air source pressure</b>	no less than 0.6MPa
<b>Power supply</b>	220V, 50/60Hz, single phase, 2KW
<b>Motor power</b>	750W
<b>Overall Dimensions</b>	760x 470 x 700 mm
<b>Net weight</b>	80Kg

**STANDARD ACCESSORIES:**

Item Name	Q'ty	Item Name	Q'ty
BUTOPOL-1000	1 set	Diamond suspension polishing liquid, 6 micron, 200ml	1 bottle
One side sticky Abrasive paper (250mm) 180#	2 pc	One side sticky polishing cloth (250mm), flocking (brown)	1 pc
One side sticky Abrasive paper (250mm) 800#	2 pc	One side sticky polishing cloth (250mm), canvas	1 pc
One side sticky Abrasive paper (250mm) 1000#	2 pc	Anti-sticky disc (250mm)	1 pc
Waterproof ring	1 pc	Magnetic working plate (250mm)	1 pc
Input-water pipe 8mm	1 pc	Power cable (Aviation plug joint)	1 pc
Output-water pipe 25mm	1 pc	Data cable (Aviation plug joint)	1 pc
Hose hoops 18-32	1 pc	Triangle valve $\Phi$ 12.7mm	1 pc
Hook	1 pc	Teflon tape	1 pc
Rubber pad with strainer $\Phi$ 12.7mm	1 pc	Fast twist joint SNZ08-04	1 pc
Touch pen	1 pc	Filter piece $\Phi$ 12.7mm	4 pcs
Technical documents: Machine manual, certificate, packing list 1 share for each			

**OPTIONAL ACCESSORIES:**

<b>Air pump (optional)</b>		
<b>Air pipe 6mmx3m (optional)</b>		
<b>Tablet PC (10.2", 4GB+64GB WiFi)</b>		
<b>Metallographic grinding paper</b>	<b>GSC250A</b>	<ul style="list-style-type: none"> <li>• 100 pieces /package</li> <li>• Material: black carborundum</li> <li>• Sand size: P80# 120# 180# 320# 600# 800# 1000# 1200# 1500# 2000#</li> <li>• Size: <math>\Phi</math>250mm</li> <li>• Waterproof and one side sticky, can be attached on the grinding plate directly</li> </ul>
<b>Anti-sticky disc</b>	<b>MAGNOMET</b>	<ul style="list-style-type: none"> <li>• Anti-sticky disc: 5 pieces/box</li> <li>• Diameter: <math>\Phi</math>250mm</li> <li>• Surface coating with Special anti-sticky layer, can attach the sticky paper and polishing cloth directly, and easily replace without sticky mark.</li> <li>• Can be reused</li> </ul>
<b>Polishing cloth</b>	<b>FT250A</b>	<ul style="list-style-type: none"> <li>• Polishing cloth 10 pieces/package</li> <li>• Velvet fabric(long floss) / canvas (short floss)/ Woolen cloth (short floss) / silk cloth (no floss)</li> <li>• <math>\Phi</math>250mm</li> <li>• One side sticky, can be attached directly on the grinding plate</li> </ul>
<b>Diamond grinding and polishing liquid</b>	<b>DSU</b>	<ul style="list-style-type: none"> <li>• Diamond grinding and polishing liquid, 500ml/bottle</li> <li>• Diamond suspending in the liquid, can be dropped automatically or watering pot, Uniformly distribution</li> <li>• Size: 0.25, 0.5, 1, 1.5, 2.5, 3, 3.5, 5, 6, 7, 9, 10, 14, 15, 20, 28, 40micron, for different material</li> </ul>