



AUTOMATIC METALLOGRAPHIC GRINDER & POLISHER TORONPOL™ GP-1AT SERIES

Automatic Metallographic Grinder & Polisher ToronPol GP-1AT Series is a high-performance, double-disk polishing machine designed for the full spectrum of metallographic sample preparation, including pre-grinding, grinding, and polishing. Built with powerful operation and low noise output, it is both durable and efficient. The fully automated polishing head minimizes manual effort, enhancing ease of use. This versatile machine is ideal for enterprises and research institutions requiring reliable and user-friendly sample preparation equipment.

APPLICATIONS

The ToronPol GP-1AT Series is an automated, all-in-one solution engineered to standardize the complete metallographic sample preparation process. By combining a programmable, automated polishing head with a dual-disk system, it eliminates operator variability and streamlines the entire workflow from coarse grinding to final polishing. This ensures exceptional reproducibility and high-quality, artifact-free surfaces, making it a cornerstone for laboratories where process control and throughput are paramount.

This integrated automation is critical for achieving consistent results in:

- **Electronics & Microelectronics:** For the highly repeatable preparation of printed circuit board (PCB) cross-sections and electronic components, where precise control is essential to prevent sample damage and achieve the perfect planarity needed for failure analysis and quality control.
- **Primary Metals Production:** In steel and aluminum mills for rapid, standardized quality checks on material cleanliness, grain size, and microstructure, providing the consistent feedback necessary for real-time process control.
- **Automotive & Aerospace Manufacturing:** To provide the high-throughput, repeatable preparation required for the process validation of heat treatments, coatings, and weld integrity, ensuring components meet stringent safety and quality standards.
- **Medical Device Manufacturing:** For the validated, reproducible preparation of implantable materials and surgical instruments, where absolute consistency is a critical component of meeting stringent FDA and ISO regulatory requirements.

FEATURES

- Multi-functional capabilities: This single machine supports the complete metallographic preparation process—rough grinding, fine grinding, rough polishing, and fine polishing—making it a cost-effective solution for sample preparation in enterprises and research institutions.
- Smooth, adjustable speed control: A specialized frequency conversion system enables users to select from three preset speeds, set a timer, and engage automatic stopping for precision and convenience.
- High-efficiency motor with low noise: Ensures reliable, quiet operation.
- Precision grinding plate: Designed for fine grinding and surface treatment to achieve a perfectly flat sample surface.
- Centralized loading system: Simplifies operation and boosts sample preparation efficiency.
- Cast aluminum chassis: Offers stable and reliable performance.
- High-strength composite shell: Molded for durability, rust-resistant, and built to last.
- User-friendly touch screen: The ToronPol GP-1AT Series features an intuitive interface for easy operation.

TECHNICAL SPECIFICATIONS

Model	ToronPol GP-1AT
Wheel (mm)	○Ø203 ●Ø254
Speed(rpm)	100-1000rpm□ can be customized
Wheel	1
Motor	550W
Mode	Automatic
Speed of head(rpm)	50-200
Holder(mm)	Φ30x6 pieces, other customization

Pressure	Individual Piston
Motor of Head	90W
Power	220V (110V is also available)
Cooling water tank	Need
Air source	Need
Paper Ring	●
Splash guard	●
Cover	●
Grinding paper	●
Polishing Cloth	●
Diamond Spray	○
Diamond Slurry	○
Alumina Powder	○
Recirculating Tank	○
● Standard ○ Option	



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