



TORONTECH



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

Automatic Metallographic Grinder & Polisher ToronPol™ GP-1A Series is a versatile, double-disk polishing machine that seamlessly combines pre-grinding, grinding, and polishing for metallographic samples. Designed with robust power and low noise, it is built to withstand rigorous use while providing smooth operation. Equipped with a fully automated polishing head, it significantly reduces labor effort and is user-friendly, making it an ideal choice for enterprises and research institutions.

APPLICATIONS

The ToronPol™ GP-1A Series is designed to automate the entire metallographic sample preparation process, from coarse grinding to final polishing. By utilizing a programmable, automated polishing head, it eliminates operator variability, delivering exceptional planarity and surface finish with unparalleled consistency. This makes it an essential tool for any laboratory where high throughput, absolute repeatability, and superior sample quality are critical for accurate microstructural analysis.

This automated preparation system is indispensable for demanding applications in:

- **Aerospace & Automotive Manufacturing:** For high-volume, process-critical quality control of components like turbine blades, engine parts, and safety-critical fasteners, where repeatable preparation is essential for meeting stringent industry and regulatory standards.
- **Medical Device Manufacturing:** To ensure the consistent, high-quality preparation of materials such as implantable alloys (titanium, stainless steel) and surgical tools, where microstructural integrity is directly linked to product safety and performance.
- **Commercial Testing & Failure Analysis:** To maximize sample throughput and ensure the analytical integrity of results for a diverse range of clients, providing the reproducible, artifact-free surfaces required for definitive failure investigations.
- **Advanced Materials R&D:** For the development of new alloys, composites, and thermal spray coatings, where eliminating preparation variables is crucial for obtaining reliable data and accurately characterizing the material's true microstructure.

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FEATURES

- Multi-functional design: This single machine covers the entire process of rough grinding, fine grinding, rough polishing, and fine polishing of metallographic samples, effectively reducing equipment costs and serving as an ideal sample preparation tool for enterprises and research institutions.
- Adjustable speed control: Equipped with a specialized frequency conversion speed regulation system, allowing users to set three commonly used speeds, customize timing, and enable automatic stop.
- Quiet, high-efficiency motor and control system for reliable, low-noise operation.
- Precision grinding plate ensures a flat, even surface on samples.
- Centralized loading system for straightforward operation and efficient sample preparation.
- Cast aluminum chassis provides stable, reliable equipment performance.
- Durable, rust-resistant high-strength composite housing.
- Automatic Metallographic Grinder & Polisher ToronPol GP-1A Series model features a user-friendly touch screen with an intuitive interface for convenient operation.

TECHNICAL SPECIFICATIONS

Model	ToronPol GP-1A
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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