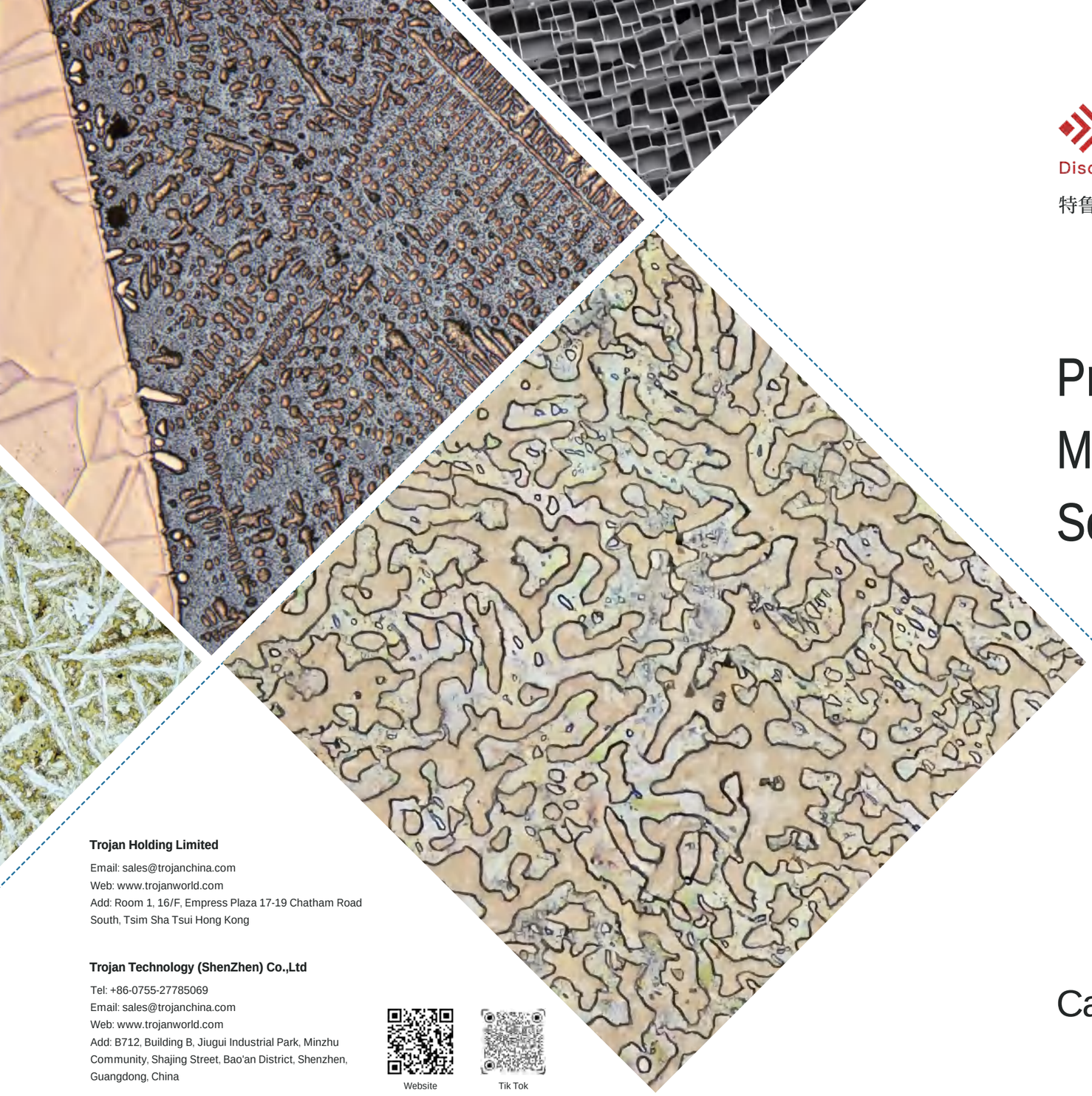
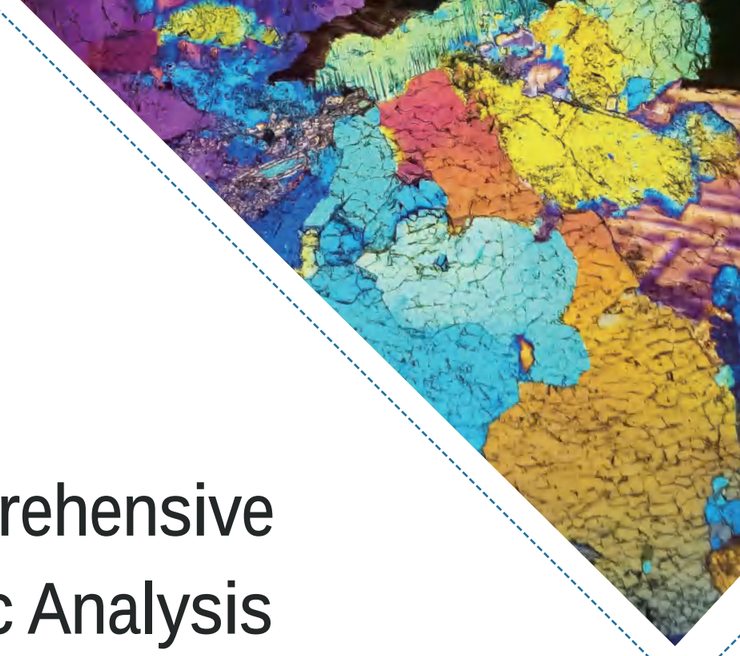


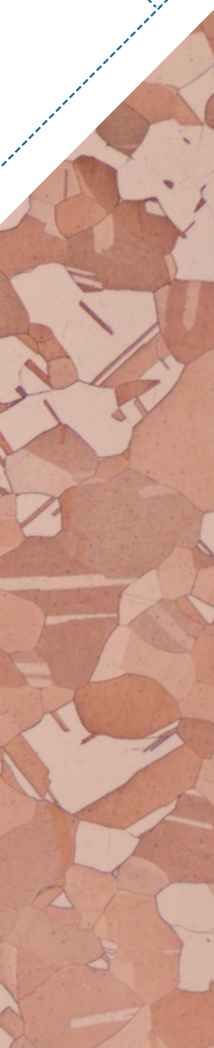
TROJAN

Discover the Truth of Material

特鲁利(苏州)材料科技有限公司

Provide Comprehensive Metallographic Analysis Solutions





Catalog 2026

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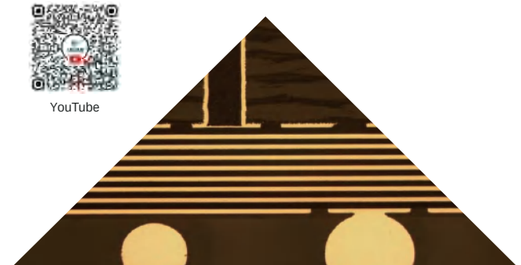
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ABOUT US

Mutually beneficial cooperation
Shaping the future

Introduction

Trojan (Suzhou) Material Technology Co., Ltd., established in 2005 and headquartered in Suzhou, Jiangsu, is dedicated to the research and development, sales, and application support of metallographic equipment and consumables. With a strong team of experienced R&D engineers and skilled application specialists, we are committed to delivering high-performance solutions that meet the evolving demands of the metallography field.

Trojan holds multiple invention patents, utility model patents, and software copyrights for metallographic technologies. Our instruments are CE-certified and accredited by CNAS, while all consumables are tested and certified by third-party organizations such as SGS. We are also certified under both ISO 9001 Quality Management and ISO 14001 Environmental Management Systems.

In recent years, Trojan has launched the Alpha series of precision grinding and polishing machines, the Beta series of metallographic cutting machines, and the Flex series of mounting systems—designed to meet the high standards of research institutions, industrial laboratories, and academic organizations both in China and abroad.

Trojan metallographic solutions are widely recognized for their quality and reliability, earning a strong reputation across the industry.



Application Scope

After 21 years of development and improvement, Trojan's products are now widely used in the following industries:

- Automobiles and components
- IC semiconductor
- New energy industry
- Various composite materials
- Aerospace and aviation mater
- PCB and SMT industry
- Fasteners and tools
- Educational institutions and research organizations



Development History

2005

Trojan (Suzhou) Material Technology Co., Ltd. was established in Suzhou.

2006

Trojan set up a metallographic consumables production base in Suzhou Industrial Park, producing a full range of Trojan-branded consumables.

2011

Trojan has established marketing and customer service centers in Shanghai, Chengdu, Tianjin, and Shenzhen, providing comprehensive service and technical support across China.

2013

Trojan Hong Kong Holding Co., Ltd. was established, marking the company's official entry into the international market. Trojan's products are now exported to Europe, the United States, and Southeast Asia, earning widespread recognition from overseas customers.

2016

Trojan established its Metallographic Equipment Division, offering research, development, production, sales, and technical support services for metallographic cutting, mounting, grinding, and other equipment.

2018

Trojan established Optical Grinding Division and launched the OPT series of planar grinding equipment, providing polishing products and technical support for industries such as fiber optics, epitaxial wafers, and semiconductors.

2019

Trojan launched the new Alpha, Beta, and Fless series of high-end metallographic testing equipment to better meet the needs of our customers.

2020

A new factory building covering over 4,000 square meters was completed and put into use, marking the beginning of Trojan's flourishing new era.

2024

The company focuses on chip failure analysis, with its flagship product, the Semipol precision polishing machine, providing high-precision grinding and polishing equipment for the semiconductor industry and precision materials science research.

2025

A metallographic equipment workshop of over 3,000 square meters has been put into operation.

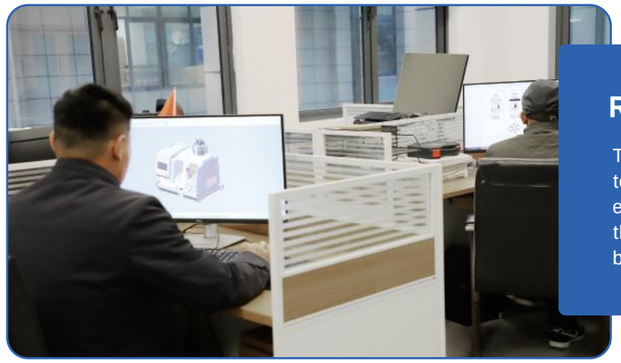
2026

We are proud to launch the WIT-1 fully automatic intelligent sample preparation system! We are dedicated to materials science, and let us shape the future together!



Customer Service

Trojan provides comprehensive pre-sales consultation, installation training, and attentive after-sales service! Your complete satisfaction is our ultimate goal.



Research and Development

Trojan has an experienced and professional team of mechanical and electrical designers, ensuring high performance and reliability of the products, and offering tailored solutions based on customer needs.



Assembly Workshop

Trojan has an assembly workshop of 1,500 square meters. All products undergo rigorous testing before leaving the factory, and all equipment is certified with CNAS and CE certifications.



Production Workshop

Trojanprovides a full range of metallographic consumables, all of which are tested and certified by third-party institutions such as SGS, ensuring perfect preparation for various metallographic samples.



Application Technology Lab

Trojanapplication engineers offer free technical consulting, tailored solutions, product training, and sample testing services.



Warehouse

Trojan holds a large inventory of finished products, with regular items ready for shipment within 1-2 days. We also offer customized products and can provide them in the shortest possible time.



Logistics Department

Trojan provides the safest and most cost effective shipping options based on customer needs.



Social Responsibility and Environmental Protection

The company actively responds to national initiatives and practices the concept of green development, actively launching green and low-carbon operations. Trojan equipped with a 50KW solar photovoltaic power generation facility, contributing to the nation's efforts to achieve carbon peak and carbon neutrality.

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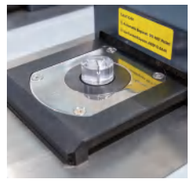
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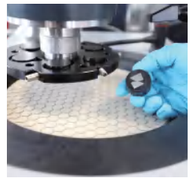
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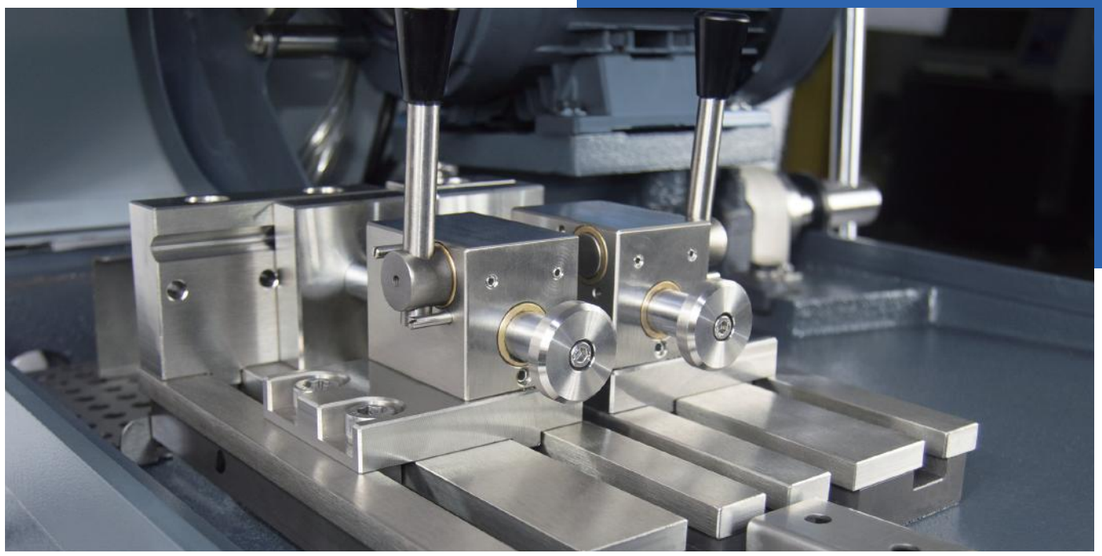
Sectioning

Cutting is the first step in material analysis. The selection of cutting machines and blades must align with the sample's geometry and material properties. An ideal metallographic cut should prevent thermal damage and deformation while ensuring the necessary precision and speed.
Hardness and ductility are the two key parameters for selecting cutting blades. The optimal choice depends on the material's size, hardness, ductility, and the equipment used. Trojan's cutting products speak for themselves, making the cutting process simple, fast, and precise.



Manual Abrasive Sectioning Machine

Model	CT-2300	CT-250S/250V	CT-300
Wheel Diameter	Φ180mm	Φ250mm	Φ300mm/Φ350mm
Motor Power	0.9kW	2.2kW	5.5kW
Wheel Speed	0-3000rpm	2800rpm/1000-3500rpm Adjustable	2000-2500rpm
Wheel movement	Y-axis	Chop Cutting	Chop Cutting
Vising Table Size	350x370mm	210x230mm	385x330mm
Maximum Cutting Diameter	Φ30mm	Φ80mm	Φ110mm/Φ130mm
Maximum Square Cross-Section	30x50mm	60x130mm	90x130m



CT-2300 Manual Cut-off Machine

CT-2300 is a compact, desktop Manual Cut-off Machine, widely used for cutting materials such as PCB boards, semiconductor components, wafer ceramics, quartz glass, and petrographic samples.



Dimension: 470×505×359(Closed) 470×556×631(Open)
Weight: 45Kg

Features

- Wheel Diameter: Φ180mm;
- Rated power: 0.9kW;
- Maximum cutting diameter: Φ30mm;
- Offers both dry and wet cutting modes;
- T-slot clamping device for easy fixture installation;
- Fully transparent high-strength top cover for easy observation of the cutting process;
- The top cover can be set to "unlock" mode, allowing cutting of samples that exceed the platform's size limitations;
- Speed adjustable, ranging from 200 to 3000 rpm;
- The motor is equipped with a cooling fan and overload protection.



CT-250S/250V Manual Sectioning Machine

CT-250S/250V is a manual sectioning machine designed with safety and environmental principles in mind. It features both a safety lock and an emergency stop button for dual safety protection during operation. Equipped with a high-grade waterproof motor, an ergonomically designed cutting handle, and a simple control panel, it can accommodate 250mm/10-inch diameter cutting wheels, making it suitable for fast cutting of various metal and non-metal materials.





Dimension: 664×684×621(Closed) 664×898×829(Open)
Weight: 100Kg(CT-250S) 105Kg(CT-250V)

Features

- Wheel Diameter: Φ250mm;
- Rated power: 2.2kW;
- Maximum cutting diameter: Φ80mm;
- Powerful cooling system prevents workpiece burning;
- Equipped with an independent cooling tank and filter for debris collection, extending machine lifespan;
- Manual chop cutting, easy to operate;
- Omron low-voltage control switch, ensuring safety and reliability;
- Large observation window with high-brightness lighting for clear cutting process visibility;
- Durable, reliable, and low-noise.



CT-300 Manual Sectioning Machine

CT-300 is a user-friendly and powerful manual cutting machine. It is designed for cutting samples of various shapes, sizes, and complex materials. The upward-sliding safety door allows quick and easy sample placement. Equipped with a robust motor and an ergonomically designed cutting arm, it ensures efficient and stable cutting. Simple to operate and easy to learn.



Features

- Wheel Diameter: Φ300mm/Φ350mm;
- Rated power: 5.5kW;
- Maximum cutting diameter: Φ110mm/Φ130mm;
- High-power 5.5kW motor for efficient and effortless cutting;
- Cast aluminum base and integrated worktable provide strong rigidity for stable cutting;
- Spacious worktable and operating area for faster and easier sample clamping;
- Simple and intuitive control panel for quick and easy operation;
- Larger cooling pipes for more effective cooling.



Dimension: 907×1067×1530mm(Closed）
907×1067×1974mm(Open）
Weight: 285Kg



CT-150A Low-Speed Precision Cutting Machine

CT-150A Low-Speed Precision Cutter is designed for precision cutting of various hard materials, and is especially suitable for accurate sectioning of small metal and non-metal components as well as electronic parts.
The machine can be equipped with diamond blades or resin-bonded blades of other materials to meet cutting requirements for different specimen types. A variety of specimen fixtures are available, enabling the workpiece to be positioned at the optimal angle for cutting, and allowing precise fine adjustment of the horizontal feed position.



Dimension: 450×320×360mm Weight: 26Kg

Features

- Wheel Diameter:Φ100mm/Φ125mm/ Φ150mm;
- Rated power: 0.5kW;
- Maximum cutting diameter:40mm;
- Adjustable cutting wheel speed: 50–600 rpm;
- Constant-speed cutting achieved by adjusting the counterweight;
- 5-inch touchscreen with program control for convenient operation;
- Segmented precision cutting function along the X-axis;
- Quick specimen clamping with accurate positioning;
- Multiple fixtures included, suitable for cutting irregular-shaped workpieces.

Automatic Abrasive Sectioning Machines

Model	TableCut-200	Beta-250	Beta-300Pro	Beta-400Pro	Beta-500Pro
Wheel Diameter	Φ200mm	Φ250mm	Φ300mm	Φ400mm	Φ500mm
Motor Power	1.0kW	3kW	4kW	7.5kW	15kW
Wheel Speed	500-3000rpm	1000-3500rpm	800-3500rpm	800-2000rpm	500-2500rpm
Wheel movement	Horizontal	Vertical/ Horizontal / Segmented / Continuous/ R-Axis Rotary Cutting(Optional)	Vertical/ Horizontal/ Vertical + Horizontal	Manual/ Platform Feed / Chop/ Segmented/ Parallel Slicing	Vertical/ Horizontal/ Segmented/ Continuous/ R-Axis Rotary Cutting/ Angle Cutting (Optional)
Cut types	Manual control with joystick or automatic feeding	Constant speed / Pulsing/ Automatic speed adjustment	Constant speed / Pulsing/ Automatic speed adjustment	Constant speed / Pulsing/ Automatic speed adjustment	Constant speed / Pulsing/ Automatic speed adjustment
Vising Table Size	465x270mm	280x300mm	280x536mm	438x388mm	832x728mm
Maximum Cutting Diameter	Φ50mm	Φ85mm	Φ110mm	Φ130mm(400mm Abrasive blades) Φ150mm(450mm Abrasive blades)	Φ190mm
Maximum Square Cross-Section	50x126mm	85x250mm	80x200mm	150x300mm(400mm Abrasive blades) 150x300mm(450mm Abrasive blades)	190x360mm
Travel movement	Y-axis：240mm	X-axis: 100mm Y-axis: 250mm Z-axis: 160mm R-axis: 360°	X-axis: 80mm Y-axis: 200mm Z-axis: 150mm	X-axis: 200mm Y-axis: 370mm Z-axis: 220/175mm	X-axis: 550mm Y-axis: 500mm Z-axis: 330mm R-axis: 360°

*X: left–right; Y: front–back; Z: up–down; R: rotation.

TableCUT-200 Automatic Precision Cut-Off Machine

TableCUT-200 is automatic precision cut-off machine, equipped with various fixtures to handle irregularly shaped workpieces. It is suitable for precise cutting of various materials, including metals, PCB boards, semiconductors, crystals, ceramics, quartz glass, and rock samples.



Dimensions: 570×717×405mm (Open: 570×717×900mm)
Weight: 63Kg



Features

- Wheel Diameter: Φ200mm;
- Rated power: 1.0kW;
- Maximum cutting diameter: 50mm;
- Cutting speed: 0.01-5 mm/s, precisely adjustable;
- Speed: 500-3000 rpm, adjustable, with a quick-access speed control button;
- 5" Mainstream touch screen, manual type automatic program control, intuitive and convenient;
- Laser alignment for quick and secure sample fixation, with precise positioning;
- Equipped with various fixtures, allowing the cutting of irregularly shaped workpieces, with an option for an automatic fixture;
- Manual and automatic modes with four cutting options, featuring builtin overload protection to ensure perfect cutting results.



FlexCUT-2 Automatic Precision Cut-Off Machine

FlexCUT-2 is a fully automatic vertical metallographic cutting machine. It utilizes advanced intelligent control technology with full touchscreen operation. Equipped with a threeaxis industrial joystick and laser positioning, it features a larger cutting worktable for easier operation. The machine integrates various cutting methods and techniques, ensuring excellent cutting surfaces even for heavy-duty, large cross-section samples. Its intelligent cutting modes offer the highest level of repeatability.



Dimension: 550×660×420mm Weight: 50Kg

Features

- Wheel Diameter: Φ203mm;
- Rated power: 1kW;
- Maximum cutting diameter:50mm;
- Infinitely variable cutting speed from 0.01 to 5 mm/s;
- Adjustable cutting wheel speed from 1000 to 5000 rpm;
- 7-inch touchscreen with manual and automatic program control for intuitive operation;
- X-axis precision sectioning function;
- Quick and secure specimen clamping with precise positioning;
- Versatile sample holders available for irregularly shaped workpieces;
- Integrated manual and automatic modes with built-in overload protection for optimal cutting results.



Beta-250 Automatic Abrasive Sectioning Machine

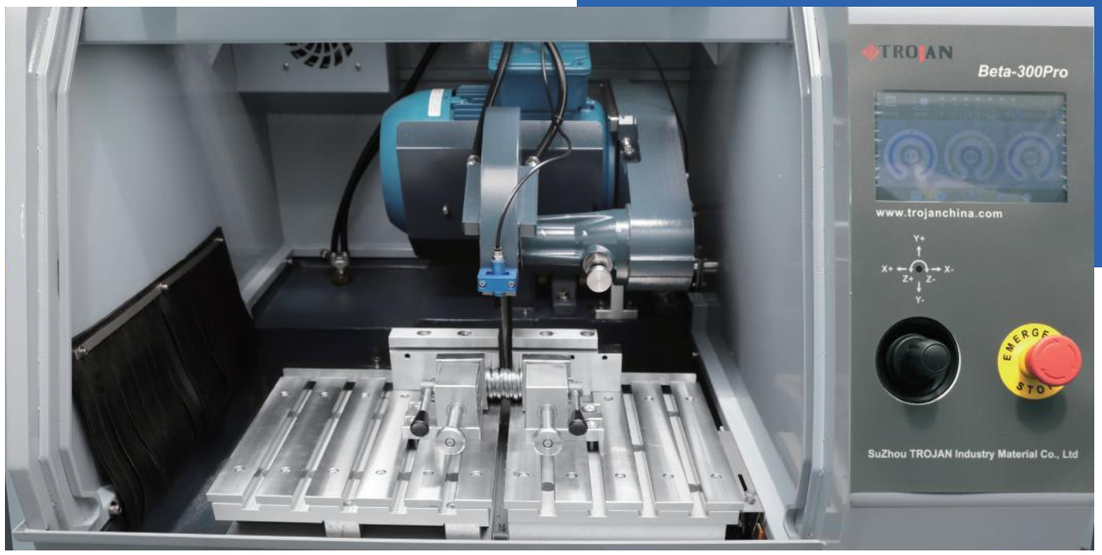
Beta-250 is a fully automatic cutting machine equipped with advanced intelligent control technology and a full-touchscreen interface. It is suitable for cutting various materials, including metals, ceramics, quartz glass, and petrographic samples. Supports fully automatic cutting with X, Y, Z, and R axes, enabling multi-section cutting with varying thicknesses and angles. (Yaxis can be manually controlled, and R-axis is an optional feature.)



Dimension: 930×900×720mm Weight: 250Kg

Features

- Wheel Diameter: Φ250mm;
- Rated power: 3kW;
- Maximum cutting diameter: 85mm;
- Fully automated control of X, Y, Z, and R axes. The Y-axis supports manual control, and the R-axis (rotation/angle) is an optional feature;
- Capable of holding extra-long samples extending through the side door;
- Supports multi-section continuous cutting on the X-axis (Raxis), enabling equal thickness (angle) cutting or cutting at any specified position;
- Spacious worktable and cutting chamber, with a workta-ble size of 280×300 mm;
- 10-inch large touchscreen;
- Equipped with a laser alignment device;



Beta-300Pro Automatic Abrasive Sectioning Machine

Beta-300Pro is a fully automatic vertical metallographic cutting machine. It utilizes advanced intelligent control technology with full touchscreen operation. Equipped with a threeaxis industrial joystick and laser positioning, it features a larger cutting worktable for easier operation. The machine integrates various cutting methods and techniques, ensuring excellent cutting surfaces even for heavy-duty, large cross-section samples. Its intelligent cutting modes offer the highest level of repeatability.





Dimension：979×940×1881mm(Open)
Weight：376Kg

Features

- Wheel Diameter: Φ300mm;
- Rated power: 4kW;
- Maximum cutting diameter: 110mm;
- Featuring a 7-inch high-definition LCD touchscreen interface, capable of saving and customizing up to 20 sets of cutting parameters;
- Pulse cutting with automatic speed adjustment for enhanced cutting performance;
- X-Y-Z three-axis linkage enables fully automatic cutting, with laser alignment for precise position-ing of the cutting location;
- Adjustable cutting force with intelligent optimization based on material hardness and preset parameters;
- Multiple cutting modes to meet the cutting requirements of various samples;
- Standard fast vise enables fast and secure sample clamping, with various optional fixtures available;
- Pulse cutting function with automatic speed adjustment for superi-or cutting performance.



Beta-400Pro Automatic Abrasive Sectioning Machine

Beta-400Pro is a fully automatic large-scale cutting machine, suitable for cutting various metal materials, ceramics, quartz glass, and rock samples. Beta-400Pro is equipped with various clamps to cut irregularly shaped workpieces, and it features automatic/manual feed cutting of the worktable (Y-axis), chop cutting of the cutting disc (Z-axis), and manual/automatic horizontal translation of the worktable (X-axis).





Dimension: 1017×1317×1729mm(Closed)
1851×1774×2224mm(Open)
Weight: 376Kg

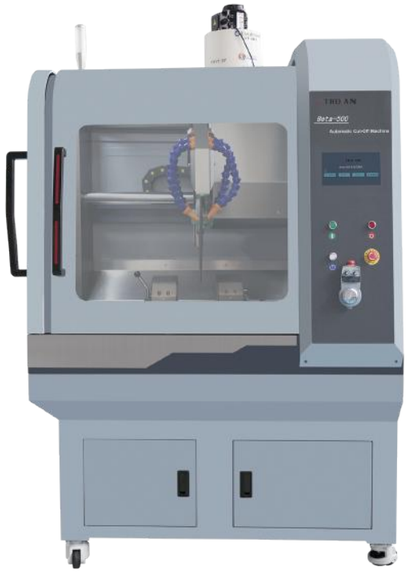
Features

- Wheel Diameter: Φ400mm/Φ450mm;
- Rated power: 7.5kW;
- Maximum cutting diameter: Φ130mm(400mm wheel)
  Φ150mm(450mm wheel);
- Cast aluminum base, 304 stainless steel cover for strength, durability, and corrosion resistance;
- Joystick control for XYZ-axis alignment, easy and quick operation;
- Large worktable and operating space;
- X-axis platformautomatically moves, enabling continuous cutting;Equipped with an exhaust and air purification system;
- 150 Litre freestanding independent water tank;
- Integrated magnetic separator, paper belt filtration system, and laser alignment for clean operation and precise positioning.



Beta-500 Automatic Abrasive Sectioning Machine

Beta-500 is a fully automatic large cutting machine, suitable for cutting various metal materials, ceramics, quartz glass, and rock samples. It features automatic multi-stage cutting with varying thicknesses and angles along the X, Y, Z, and optional R axes. (R axis is an optional feature.)



Dimension: 1500x2582x1658mm Weight: 1450Kg

Features

- Wheel Diameter: Φ500mm;
- Rated power: 15kW;
- Maximum cutting diameter: Φ190mm;
- Freestanding independent water tank with a large capacity;
- Enables multi-segment continuous cutting along the X-axis (R-axis), allowing either equal thickness (angle) sections or custom–specified positions;
- Extra-large worktable and cutting chamber; the worktable measures 728x832mm, and the cutting chamber measures 1248x1220mm with a height of 900mm;
- Equipped with a wireless handwheel, enabling four-axis control for quick alignment;
- Integrated cast aluminum base with durable powder coating, ensuring robustness and rust resistance;
- Equipped with a 10-inch large touchscreen;
- Freestanding independent water tank with a large capacity, easy to remove and clean;
- Integrated magnetic separator, paper belt filtration system, and laser alignment for clean operation and precise positioning.

Cutting Accessory

Fast vise
Applicable machine: Beta-250



Application: Small Sample
Jaw WxH: 90x45mm
Move range: 100mm
Threaded T-slot block: M6

23.01.350	F250L
23.01.360	F250R

Fast vise
Applicable machine: Beta-300/400



Application: Medium Sample
Jaw WxH: 80x60mm
Move range: 140mm
Threaded T-slot block: M10

23.01.370	F300L
23.01.380	F300R

Fast vise
Applicable machine: Beta-400/500



Application: Large Smple
Jaw WxH: 80x80mm
Move range: 150mm
Threaded T-slot block: M10

23.01.200	F400L
23.01.210	F400R

Small Fast and quick clamping
Applicable machine: TableCut-200/CT-2300



Application: Small Sample
Jaw WxH: 30x30mm
Move range: 35mm
Threaded T-slot block: M6

23.01.260	S200L
23.01.270	S200R

Fast and quick clamping
Applicable machine: CT-250



Application: Medium Sample
Jaw WxH: 50x60mm
Move range: 50mm
Threaded T-slot block: M10

23.01.240	S250L
23.01.250	S250R

Handlebar style fast-lock
Applicable machine: CT-300/Beta-300/400



Application: Large Smple
Jaw WxH: 80x70mm
Move range: 90mm
Threaded T-slot block: M10

23.01.150	S300L
23.01.160	S300R

Splitting fixture
Applicable machine: TableCut-200/CT-2300



Application: Small Sample
Jaw width: 30mm
Move range: 45mm
Threaded T-slot block: M6

23.01.305	D200

Paralleled out clamping
Applicable machine: TableCut-200/CT-2300



Application: Small Sample
Jaw width: 65mm
Move range: 28mm
Threaded T-slot block: M6

23.01.300	X200

Small vertical clamping
Applicable machine: TableCut-200/CT-2300



Application: Small Sample
Arm unloading: 60mm
Clamping height: －15~80mm
Clamping force: 160N
Threaded T-slot block: M6

23.01.290	H200

Large Vertical clamp
Applicable machine: CT-250/300, Beta-300/400/500



Application: Large Smple
Arm unloading: 90mm
lamping height: －20~90mm
Clamping force: 1600N
Threaded T-slot block: M10

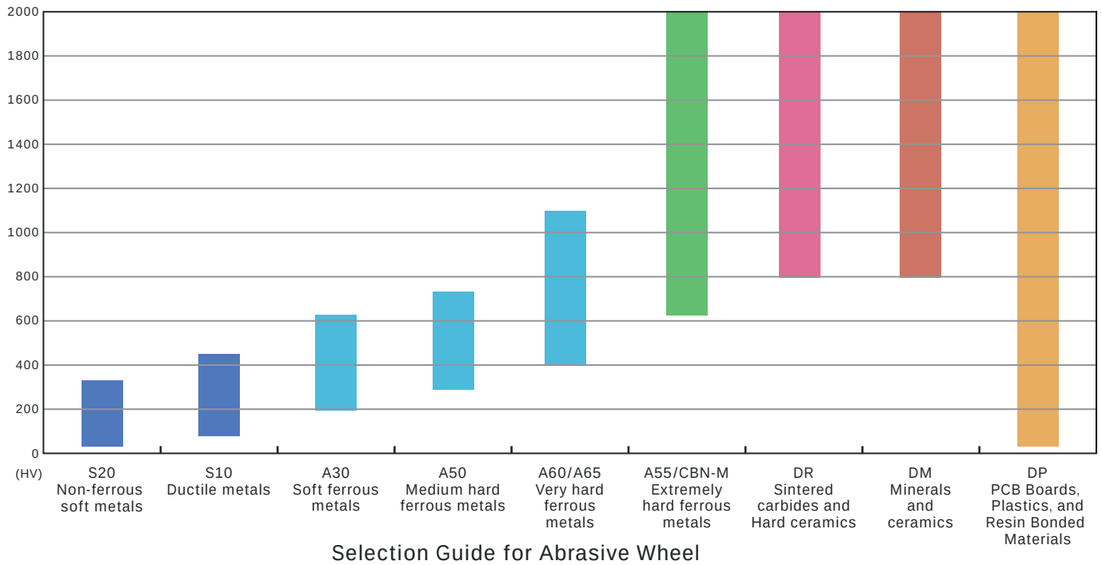
23.01.180	H400

Abrasive Wheels

Cutting is the first step in material analysis, and the selection of the cutting machine and abrasive wheels must meet the geometric dimensions and material characteristics of the sample. TROJAN's cutting products make the cutting process simple, fast, and precise.

Perfect metallographic cutting should avoid thermal damage and deformation while maintaining the necessary precision and cutting speed. Hardness and ductility are the two main factors when selecting abrasive wheels. The optimal choice depends on the material's size, hardness, ductility, and the equipment used.

TROJAN abrasive wheels feature a unique formula that ensures effective cooling and minimizes thermal damage. Additionally, their surface design prevents debris accumulation during cutting, making cleaning easier and keeping the workbench and cutting chamber clean.



Selection Guide for Abrasive Wheel

A 60 Alumina Abrasive Wheels (Very hard ferrous metals)



Material: Alumina, Resin Bonded.
Application: Used for cutting very hard ferrous metals (HRC>55)

Order No:	Code	Spec.(mm)	Package
01.01.111	A601505	150*12.7*0.5	10pcs
01.01.114-1	A601808	180*12.7*0.8	10pcs
01.01.118	A602008	200*22.0*0.8	10pcs
01.01.150	A602515	250*32.0*1.5	10pcs
01.01.160	A603020	300*32.0*2.0	10pcs
01.01.170	A603525	350*32.0*2.5	10pcs
01.01.180	A604030	400*32.0*3.0	10pcs
01.01.185	A604530	450*32.0*3.2	10pcs
01.01.190	A605040	508*50.8*4.0	10pcs

A50 Alumina Abrasive Wheels (Medium hard ferrous metals)



Material: Alumina, Resin Bonded.
Application: Used for cutting medium hard ferrous metals (HRC 40-55)

Order No:	Code	Spec.(mm)	Package
01.01.213-1	A501505	150*12.7*0.5	10pcs
01.01.214	A501808	180*12.7*0.8	10pcs
01.01.224	A502008	200*22.0*0.8	10pcs
01.01.250	A502515	250*32.0*1.5	10pcs
01.01.260	A503020	300*32.0*2.0	10pcs
01.01.270	A503525	350*32.0*2.5	10pcs
01.01.280	A504030	400*32.0*3.0	10pcs
01.01.285	A504530	450*32.0*3.2	10pcs
01.01.290	A505040	508*50.8*4.0	10pcs

A30 Alumina Abrasive Wheels (Soft ferrous metals)



Material: Alumina, Resin Bonded.
Application: Used for cutting soft ferrous metals (HRC 20-40)

Order No:	Code	Spec.(mm)	Package
01.01.313	A301505	150*12.7*0.5	10pcs
01.01.314	A301808	180*12.7*0.8	10pcs
01.01.315	A302008	200*22.0*0.8	10pcs
01.01.350	A302515	250*32.0*1.5	10pcs
01.01.360	A303020	300*32.0*2.0	10pcs
01.01.370	A303525	350*32.0*2.5	10pcs
01.01.380	A304030	400*32.0*3.0	10pcs
01.01.385	A304530	450*32.0*3.2	10pcs
01.01.390	A305040	508*50.8*4.0	10pcs

S20 Abrasive Cut Off Wheels (Non-ferrous soft metals)



Material: Silicon Carbide, Resin Bonded.
Application: Used for cutting very soft non-ferrous metals such as aluminum, copper, and alloys (HV<200).

Order No:	Code	Spec.(mm)	Package
01.02.413	S201505	150*12.7*0.5	10pcs
01.02.422	S202008	200*22.0*0.8	10pcs
01.02.450	S202515	250*32.0*1.5	10pcs
01.02.460	S203020	300*32.0*2.0	10pcs
01.02.470	S203525	350*32.0*2.5	10pcs
01.02.480	S204030	400*32.0*3.0	10pcs
01.02.485	S204530	450*32.0*3.2	10pcs
01.02.490	S205040	508*32.0*4.0	10pcs

S10 Abrasive Cut Off Wheels (Ductile metals)



Material: Silicon Carbide, Resin Bonded.
Application: Used for cutting tough titanium and titanium alloys, as well as ductility metals.

Order No:	Code	Spec.(mm)	Package
01.02.500	S101505	150*12.7*0.5	10pcs
01.02.580	S102008	200*22.0*0.8	10pcs
01.02.570	S102515	250*32.0*1.5	10pcs
01.02.560	S103020	300*32.0*2.0	10pcs

Diamond/CBN Cut Off Wheels

Diamond/CBN ultra-thin precision cut off wheels feature an ultra-thin design, high precision, and long service life. They are widely used in quality control, failure analysis, and fundamental material research across industries such as crystals, ceramics, semiconductors, integrated circuits, printed circuit boards (PCB), glass, and alloys. Diamond cut off wheels are typically categorized into three types: resin-bonded, metal-bonded, and electroplated diamond.

DP Electroplated Diamond Cut Off Wheels



Material: Metal base with nickel-plated diamond edge.
Application: Suitable for cutting PCB, plastic, fiber reinforced resin, and soft non-ferrous metals.

Order No:	Code	Spec.(mm)	Package
01.03.520	DP101304	100*12.7*0.4	1pc
01.03.525	DP131304	125*12.7*0.4	1pc
01.03.530	DP151305	150*12.7*0.5	1pc
01.03.541	DP181308	180*12.7*0.8	1pc
01.03.551	DP202210	200*22.0*1.0	1pc
01.03.560	DP253215	250*32.0*1.5	1pc
01.03.570	DP303220	300*32.0*2.0	1pc

DR Resin–Bonded Diamond Cut Off Wheels



Application: Suitable for hard and brittle materials, including ceramics, composites, carbides, and rare metals.

Order No:	Code	Spec.(mm)	Package
01.04.620	DR101304	100*12.7*0.4	1pc
01.04.625	DR131304	125*12.7*0.4	1pc
01.04.630	DR151305	150*12.7*0.5	1pc
01.04.645	DR181308	180*12.7*0.8	1pc
01.04.656	DR201310	200*22.0*1.0	1pc
01.04.660	DR253215	250*32.0*1.5	1pc
01.04.670	DR303220	300*32.0*2.0	1pc

DM Metal–Bonded Diamond Cut Off Wheels



Application: Suitable for hard and brittle materials such as glass, ceramics, and minerals.

Order No:	Code	Spec.(mm)	Package
01.05.720	DM101304	100*12.7*0.4	1pc
01.05.725	DM131304	125*12.7*0.4	1pc
01.05.730	DM151305	150*12.7*0.5	1pc
01.05.741	DM181308	180*12.7*0.8	1pc
01.05.748	DM202210	200*22.0*1.0	1pc
01.05.760	DM253215	250*32.0*1.5	1pc
01.05.770	DM303220	300*32.0*2.0	1pc

CBN–M BoronNitride Cut Off Wheels



Application: Designed for precision cutting of hard steels, iron, Co-Ni alloys, and lead-based alloys — ideal for low-speed sectioning.

Order No:	Code	Spec.(mm)	Package
01.10.920	CBN-M101304	100*12.7*0.4	1pc
01.10.925	CBN-M131304	125*12.7*0.4	1pc
01.10.930	CBN-M151305	150*12.7*0.5	1pc
01.10.935	CBN-M181308	180*12.7*0.8	1pc
01.10.950	CBN-M202210	200*22.0*1.0	1pc
01.10.960	CBN-M253215	250*32.0*1.5	1pc
01.10.970	CBN-M303220	300*32.0*2.0	1pc

Coolant

To achieve optimal cutting results and minimize thermal damage during metallographic sectioning, a dedicated cutting coolant is typically used. Free from minerals and nitrites, it provides both effective cooling and lubrication.

TJ 1220 Cutting Coolant



Features: Prevents sample from overheating and provides excellent rust prevention.

Usage: Mix with water before use at a ratio of 1:20-30. The solution will appear milky white once properly mixed.

01.07.810	1L
01.07.820	5L

TJ 1410 Cutting Coolant



Features: Protects samples from overheating and provides excellent lubrication.

Usage: Mix with water before use at a ratio of 1:20-30. The solution will appear clear and transparent once properly mixed.

01.07.857	1L
01.07.860	5L

TJ 1506 Cleaner



Features: Effectively resists the growth and corrosion of microorganisms and eliminates unpleasant odors.

Usage: Mix with water before use at a ratio of 1:20-30. The solution will appear milky white once properly mixed.

01.07.890	1L
01.07.900	5L

Mounting

Hot Mounting

When high-quality samples with uniform size and shape and a short preparation time are required, hot mounting is the ideal solution. Hot mounting involves placing the specimen and mounting resin into the cylinder, then applying pressure and heat to form a solid, consistent mount.

Cold Mounting

Trojan cold mounting resin effectively protects specimens from high temperature and pressure, ensuring stable and reliable sample preparation with consistently excellent quality.

Hot Mounting

Model	FlexPress-M/S	MT-1H	MT-2H
Power	2kW	2kW	4kW
Temperature	100-200˚C	100-200˚C	100-200˚C
Pressure Range	0-500Bar	0-500Bar	0-500Bar
Heating Mode	Circumferential Heating and Top Heating	Circumferential Heating	Circumferential Heating
Cooling Mode	Three-stage Cooling	Three-stage Cooling	Three-stage Cooling
Controls	Automatic	Manual, Sliding-type	Manual, Sliding-type
Display	FlexPRESS-M: Touch pad FlexPRESS-S: /	Touch pad	Touch pad
Number of Sleeves	1 (expandable up to 5)	1	2

FlexPRESS-M/S Automatic Modular Hot Mounting System

FlexPRESS is a modular hot mounting system designed for flexible configuration. Comprising a main unit and mounting modules, it allows for up to five mounting modules to be configured per main unit. This system caters to diverse mounting requirements and supports batch mounting operations.



FlexPRESS-M

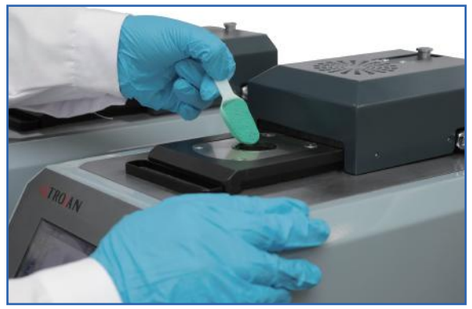
Dimension: 300×561×492 mm

Weight: 60Kg

FlexPRESS-S

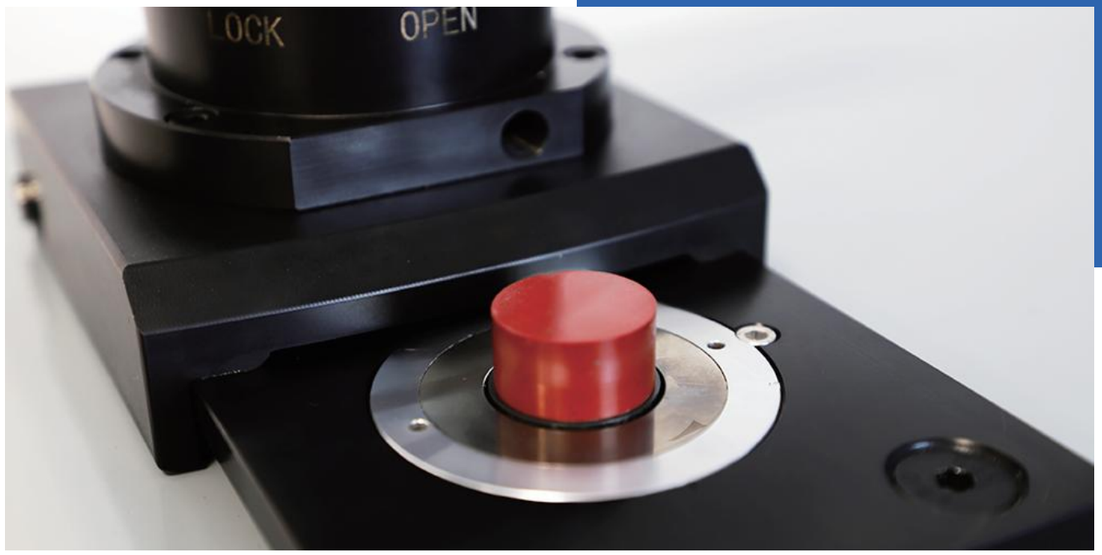
Dimension: 254×550×492 mm

Weight: 52Kg



Features

- Heating Power: 2kW;
- Cooling Method: Three-stage Cooling;
- Modular design, allowing users to freely select according to their needs;
- Sliding cover, can be opened and closed automatically or manually;
- Equipped with 7-inch touchscreen and 16 preset process parameters;
- Top and circumferential heating for rapid sample heating, enhancing efficiency;
- Pre-heating and pre-pressing capabilities, with adjustable heating power (speed);
- Optional circulating water tank for multiple cooling options.



MT-1H/2H Auto Mounting Press

MT-1H/2H Automatic Hot Mounting Machine is equipped with a 7-inch touch screen for intuitive operation. It features a hydraulic pressing system, making it suitable for hot mounting of various materials, such as epoxy resin, bakelite powder, and acrylic powder. Designed for versatility and efficiency, the system ensures consistent, high-quality specimen preparation.

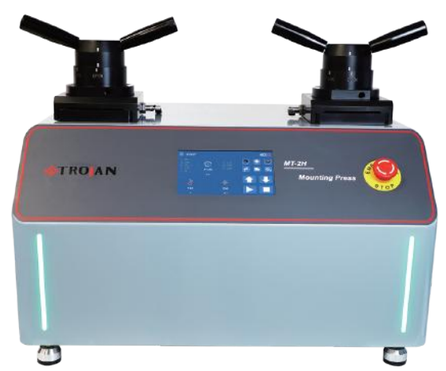
Features

- Heating Power: 2kW/4kW;
- Cooling Method: Three-stage Cooling;
- Sliding cover for easier and safer operation;
- Low operating noise and compact size;
- 7-inch touchscreen with a simple and user-friendly interface;
- Allows real-time display of temperature and pressure variations;
- LED light strip indicates the operating status;
- Multiple sets of operation parameters can be stored;
- Optional circulating water tank is available to support multiple cooling methods.



MT-1H

Dimension: 400×509×537mm Weight: 48Kg



MT-2H

Dimension: 657×509×548mm Weight: 70Kg

Hot Mounting Consumables

Material	PT 2231	BB 2232	TM 2261	EP 2237	DC 2239	MA 2275
Description	Universal Hot Mounting Resin	Edge Retention Hot Mounting Resin	Transparent Hot Mounting Resin	Epoxy Edge Retention Hot Mounting Resin	Conductive Hot Mounting Resin	Mineral-Filled Edge Retention Hot Mounting Resin
Appearance	Black/Red/Green Particles	Black powder	White powder	Black Particles	Dark Brown Particles and Powder	Light Yellow Particles and White Powder
Holding Time	4-6min	4-6min	6-8min	5-7min	4-6min	4-7min
Cooling Time	2-3min	2-3min	7-10min	4-6min	4-6min	5-8min
Cooling Rate	High	High	Low	Medium	High	Medium
Heating Pressure	150-250bar	150-250bar	150-300bar	150-300bar	150-250bar	150-300bar
Heating temperature	150-180˚C	150-180˚C	160-180˚C	150-180˚C	150-180˚C	150-180˚C
Hardness (Shore D)	85-90	90-93	85-87	90-93	90-92	92-95

*The above parameters are for a Φ30mm mold. For larger diameters, the holding and cooling times should be extended accordingly.

PT 2231
Universal Hot Mounting Resin



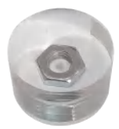
Features: Good thermosetting properties, widely used.
Application: Suitable for most materials.

BB 2232
Edge-Retention Hot Mounting Resin



Features: Exceptional hardness, superior grinding/polishing characteristics, excellent demolding performance.
Application: Suitable for hard materials such as hardened gears, hard alloys, and ceramics.

TM 2261
Transparent Hot Mounting Resin



Features: Fine particle size,rapid mounting process,colorless and transparent.
Applications: Suitable for mounting specimens requiring optical clarity or as a top layer for label display; dissolvable in Trojan-specific solvent.

EP 2237
Edge Retention Mounting Resin



Features: Extremely high hardness, optimal edge bonding, excellent adhesion to sample surfaces.
Application: Suitable for hard materials, such as hardened gears, hard alloys, and ceramics.

DC 2239
Conductive Hot Mounting Resin



Features: Superior electrical conductivity,virtually eliminates voltage loss.
Applications: Designed for SEM analysis.

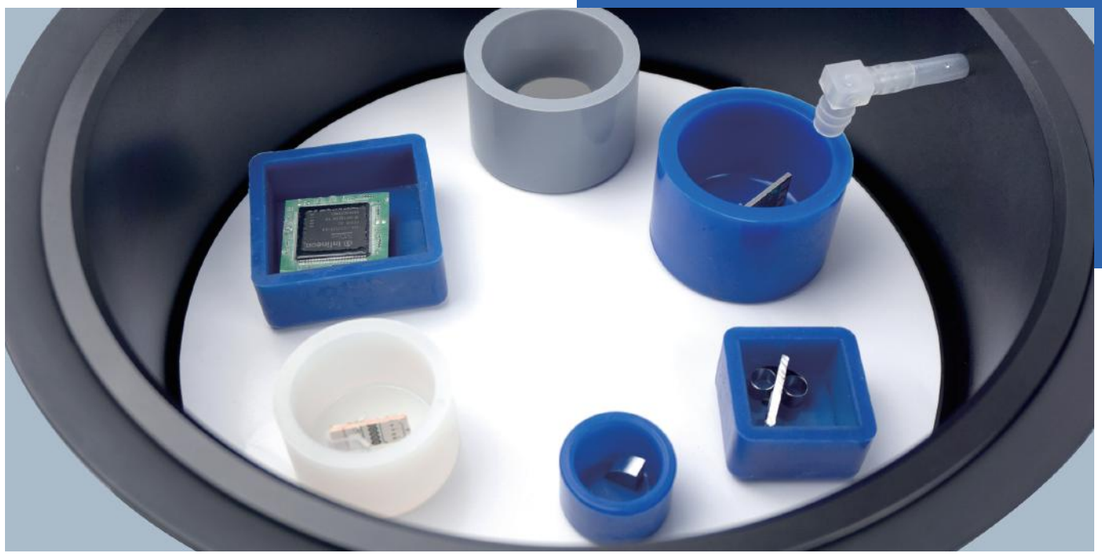
MA 2275
Mineral-Filled Edge Retention Hot Mounting Resin



Features: High hardness, good adhesion to sample surfaces, and excellent grinding and polishing performance.
Application: Suitable for medium-hard materials, such as standard hard alloys, general steels, aluminum, copper,and other materials.

Ordering Information

PT 2231	02.01.310 Black 1kg 02.01.320 Black 4kg 02.01.325 Black 20kg	02.01.311 Green 1kg 02.01.321 Green 4kg 02.01.326 Green 20kg	02.01.312 Red 1kg 02.01.322 Red 4kg 02.01.327 Red 20kg
BB 2232	02.01.210 1kg 02.01.220 4kg 02.01.225 20kg		
TM 2261	02.01.140 1kg 02.01.144 4kg 02.01.145 20kg		
EP 2237	02.01.710 1kg 02.01.720 4kg 02.01.751 20kg		
DC 2239	02.01.910 1kg 02.01.940 4kg 02.01.945 20kg		
MA 2275	02.01.960 1kg 02.01.965 4kg 02.01.970 20kg		



ThetaVAC-2 Vacuum Cold Mounting Machine

ThetaVAC-2 is a program-controlled vacuum mounting machine. This system is ideal for vacuum embedding with epoxy resin, offering excellent porosity impregnation capabilities. It allows the epoxy resin to penetrate small pores and cracks quickly and effectively, ensuring edge protection and thorough filling of the sample. The ThetaVAC-2 is particularly well-suited for preparing porous materials and is widely used in the preparation of failure analysis samples for cracked components, porous castings, composite materials, as well as electronic components, rocks, minerals, and ceramics.



Dimension: 507×464×644mm(Open)
Weight: 18Kg



Features

- Program-controlled with adjustable vacuum level, cycle count, and corresponding time settings.
- Extra-large vacuum chamber, capable of holding up to 12 samples with a diameter of 40mm;
- Electric rotating table for convenient and efficient mounting;
- Simple to operate, safe and reliable;
- The interior is coated with Teflon, making it easy to clean.

Technical Data

Model		ThetaVAC-2
Electronics	Controls	7-inch Touch pad
	Timed Cycle	Timing range: 0-10 minutes, automatic vacuum/venting, automatic cycle
	Program	20 sets
Vacuum Setting	Vacuum Level	0~-90Kpa
	Maximum Vacuum Flow	75 L/min
	Noise level	55-60dB
Working Space	Dimensions	Inner diameter of Φ252mm, capable of holding up to 12 samples of Φ40mm simultaneously
	Control	Jog mode, direction: clockwise/counterclockwise



UVmount Curing Machine

UVmount is a cold mounting system that utilizes ultraviolet (UV) light to rapidly cure resin in as little as 60 seconds. By pouring the liquid resin into dedicated molds and placing them inside the chamber, up to 20 fully transparent specimens can be prepared simultaneously. With its streamlined operation and ultrafast curing process, UVmount delivers efficient and high-quality sample preparation.



Dimension: 400×404×188mm(Closed)
400×651×188mm(Open）
Weight: 20Kg

Features

- Automatic or manual operation of the chamber door;
- One-click start for automatic sample loading and unloading;
- 4.3-inch touchscreen for display and operation;
- The irradiation time can be freely set, and it is equipped with 4 preset timer buttons for quick selection;
- The dual-layer light source provides uniform illumination without any blind spots;
- Achieves uniform curing from the inside out;
- Low heat generation during curing, with the maximum temperature during curing not exceeding 90°C;
- Dual-fan cooling system;
- Exhaust and air purification system.

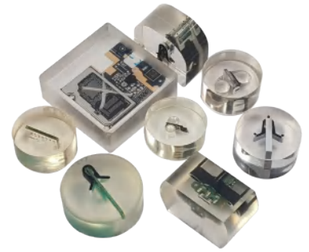
Technical Data

Model	UVmount Curing Machine
Dimensions of platform	260×200 mm
Maximum sample height	50mm
Irradiation time	0~100min
Types of Light	Ultraviolet Light (Main Wavelength: 365nm)
Voltage/Frequency	85~240V,50/60Hz （1Ph/N/PE）



ThetaMount Pressure Cold Machine

ThetaMount Pressure Cold Machine features a compact design with a maximum pressure of up to 2 bar, enhancing edge adhesion of samples. It ensures the rapid curing of cold mounting resin without affecting the physical and chemical properties of the resin and hardener mixture. Therefore, it is ideal for the rapid curing of all cold mounting resins, especially TJ-2210 acrylic resin, and is capable of producing high-quality specimens.



Features

- Compact design with fast vacuum evacuation;
- Bubble-free after curing;
- No impact on the physicochemical properties of the resin and hardener;
- Enhances the edge bonding performance of the sample;
- High sample preparation efficiency and excellent quality;
- Timer with buzzer function.

Technical Data

Model	ThetaMount
Working pressure	2.0bar
Safety valve	2.8~3.3bar
Air supply	3~10bar
Internal dimensions	Φ235×170mm



Dimension: 308×415×289mm (Closed)
308×415×342mm (Open)
Weight: 8.5Kg

Cold Mounting Consumables

Resin	Acrylic Resin		Epoxy Resin					
Material	TJ 2210	TJ 2800	TJ 2220	TJ 2568	TJ 2221	TJ 2226	TJ 2227	TJ 2228
Part A	Resin, Powder	Resin, Powder	Epoxy Resin, Liquid	Epoxy Resin, Liquid	Epoxy Resin, Liquid	Epoxy Resin, Liquid	Epoxy Resin, Liquid	Epoxy Resin, Liquid
Part B	Hardener liquid	Hardener liquid	Hardener liquid	Hardener liquid	Hardener liquid	Hardener liquid	Hardener liquid	Hardener liquid
A:B (w/w)	10:8	10:5	2:1	4.5:1	2:1	4.5:1	2:1	2:1
Mixing Time	2-4min	2-4min	4-8min	5-10min	5-10min	10-20min	5-10min	10-20min
Curing Time 25˚C	8-10min	8-10min	30-60min	45-90min	1-2hours	4-8hours	2-3hours	8-12hours
Peak Temperature	80˚C	85˚C	144˚C	125˚C	112˚C	90˚C	90˚C	40˚C
Hardness (Shore D)	80	82	82	82	78	82	82	80
Edge Retention	Good	Better	Better	Excellent	Good	Excellent	Excellent	Better

*Φ30mm mold, under room temperature conditions of 20-25˚C.

*The Trojan DSV10 solvent can be used to dissolve resin that has already cured.

Acrylic Resin

Acrylic resin has good permeability and stable chemical properties. It is typically used for rapid curing or the preparation of a large number of samples.

TJ 2210 Acrylic Resin

Features: High transparency, good flowability and permeability, making it especially suitable for PCB and other electronic components. Curing time: 8-10 minutes

Order No:	Description	Package
02.03.411	Resin, Powder	1kg
02.03.412	Hardener, liquid	800ml
02.03.421	Resin, Powder	2.5kg
02.03.423	Hardener, liquid	2000ml



TJ 2800 Acrylic Resin

Features: Semi-transparent, good edge retention, and low shrinkage rate. It performs better with a cold mounting press. Curing time: 8-10 minutes

Order No:	Description	Package
02.03.511	Resin, Powder	1kg
02.03.512	Hardener, liquid	1000ml



Epoxy Resin

Epoxy resin offers excellent flowability, superior chemical properties, strong adhesion, low shrinkage, and high transparency.

TJ 2220 Epoxy Resin (2:1)

Features: Colorless transparent or light yellow fast-curing epoxy system with good adhesion.
Curing time: 30-60 minutes

Order No:	Description	Package
02.04.650	Epoxy Resin, Liquid	2LB
02.04.651	Epoxy Hardener, Liquid	1LB
02.04.660	Epoxy Resin, Liquid	2kg
02.04.661	Epoxy Hardener, Liquid	1kg



TJ 2568 Epoxy Resin (4.5:1)

Features: Colorless and transparent, fastcuring epoxy system, low shrinkage,excellent adhesion.
Curing time: 45-90 minutes

Order No:	Description	Package
02.04.855	Epoxy Resin, Liquid	4.5kg
02.04.856	Epoxy Hardener, Liquid	1kg
02.04.857	Epoxy Resin, Liquid	1kg
02.04.858	Epoxy Hardener, Liquid	230g



TJ 2221 Epoxy Resin (2:1)

Features: Colorless and transparent, a versatile fast-curing epoxy resin. Curing time: 1-2 hours

Order No:	Description	Package
02.04.711	Epoxy Resin, Liquid	2LB
02.04.712	Epoxy Hardener, Liquid	1LB
02.04.721	Epoxy Resin, Liquid	2kg
02.04.722	Epoxy Hardener, Liquid	1kg



TJ 2226 Epoxy Resin (4.5:1)

Features: Colorless and transparent, a general-purpose slow-curing epoxy resin. Curing time: 4-8 hours

Order No:	Description	Package
02.04.773	Epoxy Resin, Liquid	1kg
02.04.774	Epoxy Hardener, Liquid	230g
02.04.777	Epoxy Resin, Liquid	4.5kg
02.04.778	Epoxy Hardener, Liquid	1kg



TJ 2227 Conductive Epoxy Resin (2:1)

Features: Colorless and transparent, conductive, suitable for SEM analysis. Curing time: 2-3 hours

Order No:	Description	Package
02.04.920	Epoxy Resin, Liquid	1kg
02.04.921	Epoxy Hardener, Liquid	0.5kg



TJ 2228 Epoxy Resin (2:1)

Features: Colorless and transparent, a versatile slow-curing epoxy resin.
Curing time: 8-12 hours

Order No:	Description	Package
02.04.871	Epoxy Resin, Liquid	2kg
02.04.872	Epoxy Hardener, Liquid	1kg



TJ 2562 Epoxy Resin (3:1)

Features: Colorless and transparent, low viscosity epoxy system with good adhesion.
Curing time: 10-20 hours

Order No:	Description	Package
02.04.853	Epoxy Resin, Liquid	1.5kg
02.04.854	Epoxy Hardener, Liquid	0.5kg



UV Curing Resin

Low energy UV curing resin, high transparency and low heat release, cures in about one minute. Ideal for fast batch preparation of samples.

TJ 2400 UV Resin

Features: Fast curing speed, high transparency, low exothermic heat.
Curing time: 30S-60S

Order No:	Description	Package
02.05.110	TJ 2400 UV Resin	1kg



TJ 2404 UV Resin

Features: 2-minute curing time, low exothermic heat, low viscosity, and good flowability.

Order No:	Description	Package
02.05.200	TJ 2404 UV Resin	1kg



Mounting Accessories

Sample Holding Clips

Trojan offers a complete solution for mounting accessories. Metal fixtures can be used to secure samples for hot mounting, while plastic fixtures are suitable for securing samples for cold mounting.



Plastic Coil Clip

07.01.010	6*100mm	100pcs
07.01.012	6*100mm	1000pcs



Stainless Steel Coil Clip

07.01.016	7*120mm	100pcs
07.01.017	7*120mm	1000pcs



S-shaped Black Plastic Clip

07.05.001	20*10*8mm	100pcs



X-shaped Plastic Clip

07.06.010	Black	100pcs
07.06.020	White	100pcs
07.06.030	Transparent	100pcs
07.06.040	Red	100pcs
07.06.050	Green	100pcs

2-part Mounting Cups



The 2-part Mounting Cups feature a detachable bottom, allowing easy removal of samples after mounting. It is recommended to use in conjunction with the EtaKit separator.

08.02.002	Φ25*20mm	10pcs
08.02.004	Φ30*23mm	10pcs
08.02.006	Φ32*25mm	10pcs
08.02.008	Φ40*27mm	10pcs

Silicone Molds



Silicone cutting molds are durable and widely used for acrylic resin and epoxy resin.Reusable, with easy sample demolding.

08.02.018	Φ20*18mm	10pcs
08.02.020	Φ25*18mm	10pcs
08.02.022	Φ30*18mm	10pcs
08.02.030-1	Φ40*25mm	10pcs
08.02.050	50*70*20mm	10pcs
08.02.058	180*106*30mm	10pcs

Transparent Silicone Molds

Transparent, durable, and reusable silicone molds, widely used for UV-curing embedding materials.

08.02.022-3	Φ30*18mm	10pcs
08.02.030-3	Φ40*27mm	10pcs
08.02.055-1	50*50*20mm	10pcs

Teflon Mounting Cups



Made of Teflon material, durable, heatresistant, with an oval-shaped bottom for easy demolding.

08.02.110	Φ25mm	1pc
08.02.120	Φ30mm	1pc
08.02.132	Φ40mm	1pc

Disposable Sample mold



Used for cold curing.

1	08.01.013	24*20*10mm	500pcs
2	08.01.015	22*11*8mm	500pcs
3	08.01.030	Φ30mm	100pcs
	08.01.035	Φ30mm	500pcs
4	08.01.038	20*20*12.3mm	500pcs

Etakit Splitter



Used for the quick demolding of samples afterfixation and molding in the 2-part mounting cups.

13.20.003

Release agent



Application: Prevents hot mounting resin from adhering to the ram.
Material: Ultra-fine stearate powder.

02.09.002 20g

Quantitative Resin Feeder



Application: Quantitative addition of hot mounting resin to prevent dust contamination in the air.

24.01.300 1pc

Grinding&Polishing



Grinding

In metallographic sample preparation, grinding is a crucial step for planarizing the surface of embedded specimens. This process employs abrasives—commonly grinding paper or diamond grinding discs—fixed on the grinding wheel to remove excess material from the specimen's surface, achieving the desired surface condition. Typically, the grinding procedure consists of coarse grinding, medium grinding, and fine grinding stages. Proper selection of grinding equipment and consumables will streamline and enhance the efficiency of the grinding process.

Polishing

Polishing involves placing a small amount of polishing powder or slurry onto a polishing cloth, then positioning the specimen on the rotating cloth. The objective is to eliminate surface deformation and scratches from the grinding process, achieving a scratch-free mirror finish suitable for microscopic structural analysis under a metallurgical microscope.

Manual Grinding and Polishing Machine

The Trojan manual series grinding and polishing machines feature a robust design, ensuring smooth and reliable operation. Their compact design minimizes space requirements. With a wide range of models available, they can meet various needs, making them ideal for laboratories requiring manual grinding and polishing.

Model	Alpha-108	Alpha-112	Alpha-208	Alpha-210	Alpha-212/212D
Quantity	Single-disc	Single-disc	Dual-disc	Dual-disc	Dual-disc
Size	8"/10"	12"	8"	10"	12"
Direction	CW/CCW	CW/CCW	CW/CCW	CW/CCW	CW/CCW
Speed	50-600rpm	50-600rpm	50-600rpm	50-600rpm	50-600rpm/0-600rpm
Panel	Touch Panel	Touch Panel	Touch Panel	Touch Panel	Touch/Mechanical Knob
Rated Power	750W	750W	1500W	1500W	1500W
Rated Current	4A	4A	8A	8A	8A

Alpha-108

Single Wheel Grinder and Polisher



380mm | 657mm | 270mm | 20Kg

- 8" / 10" work disc optional;;
- Waterproof glass touch buttons.

Alpha-112

Manual Grinder and Polisher



460mm | 655mm | 288mm | 30Kg

- Extra-large 12" working disc, ideal for the preparation of large samples;
- Waterproof glass touch buttons.

Alpha-208

Double Wheels Grinder and Polisher



672mm | 575mm | 280mm | 34Kg

- 8" working disc;
- Waterproof glass touch buttons.

Alpha-210

Double Wheels Grinder and Polisher



770mm | 657mm | 270mm | 40Kg

- 10" working disc;
- Waterproof glass touch buttons.

Alpha-212

Manual Grinder and Polisher



860mm | 662mm | 279mm | 56Kg

- Extra-large 12" working disc, ideal for the preparation of large samples;
- Waterproof glass touch buttons.

Alpha-212D

Manual Grinder and Polisher



860mm | 662mm | 279mm | 56Kg

- Extra-large 12" working disc, ideal for the preparation of large samples;
- Mechanical knob speed adjustment, fast and reliable .



Alpha-335G Floor-standing grinding machine

Alpha-335G is an automatic grinder designed for coarse grinding of samples with a diameter of up to 180mm in the sample fixture. It is ideal for preparing large and numerous samples in factory laboratories, significantly enhancing the operator's preparation efficiency.

Technical Data

Model		Alpha-335G
Stone	Dimension	Φ350×Φ38×45mm
	Speed	100-1500rpm
	Rotational Direction	Counter-Clockwise
	Motor Power	4.0kW
Specimen Holder	Diameter	160mm（180mm Otional）
	Maximum sample height	40mm
	Force	50-700N
	Speed	10-125rpm
	Rotational Direction	Clockwise / Counterclockwise
	Motor Power	0.37kW
	Torque	17NM
Removal Control	Accuracy	0.1mm
	Removal	0.1-10mm
Dresser	Dresser Mode	Auto(Time, Removal) /Manual
	Removal	10-200μm



Dimension: 800×900×1650mm(Closed)
Weight: 490Kg

Features

- Rapid grinding with removal rate of up to 1000μm per minute;
- Supports simultaneous preparation of up to12 samples (25mm diameter);
- 10-inch LCD touchscreen interface, simple and easy to understand;
- Customizable program library for simple and convenient operation;
- Integrated dressing system enhances grinding performance and efficiency whilereducing preparation time;
- The detachable flushing pipe allows for quick and easy cleaning of the grinding area.



Alpha-335P
Grinding and polishing machine

Alpha-335P is an automatic grinding polishing machine designed for fast grinding and polishing of samples. It is especially suitable for laboratories or workplaces that handle large or high-volume samples, providing precise and reliable grinding and polishing to ensure sample repeatability and improve preparation results.

Technical Data

Model		Alpha-335P
Disc	Diameter	300mm/350mm
	Speed	10-1000rpm
	Rotational Speed	Counter-clockwise
	Motor Power(S1)	2.2kW
Specimen holder	Diameter	160mm（180mm Otional）
	Maximum sample height	40mm
	Force	50-700N
	Speed	10-125rpm
	Rotational Speed	Clockwise / Counterclockwise
	Motor Power	0.37kW
	Torque	17NM
	Offset distance	0-80mm
Drip system	Quantity	6 sets
	Flow rate	0.1-35mL/min
	Volume	500mL
	Mixing + high flow rate	3 sets
Removal Control	Accuracy	0.1mm
	Removal	0.1-10mm



Dimension: 800×900×1650mm(Closed)
Weight: 485Kg

Features

- 10-inch LCD touchscreen interface, intuitive and easy to use;
- Supports simultaneous preparation of up to 12 samples (25 mm diameter);
- Customizable program library for easy and convenient operation;
- The work disc features a soft-locating collet structure for easy removal ;
- Quick clamping system for easy installation and convenient operation;
- Equipped with six liquid dispensing pumps and three electromagnetic stirring units to prevent suspension settling.

Automatic Grinding and Polishing Machine

Trojan Alpha-610/660 series automatic grinding and polishing machines feature a compact design, integrating multiple functions such as multipoint loading, center loading, and controlled grinding. These machines meet the preparation requirements of various sample types. With a sturdy and reliable structure, a simple control interface, and easy operation, they ensure uniformity in the flatness of polished samples. This versatile grinding and polishing solution is ideal for large-scale sample preparation, providing highly repeatable results.

Model	Alpha-610	Alpha-611	Alpha-660	Alpha-661
Quantitative Grinding	Y	/	Y	/
Accuracy	50μm	/	50μm	/
Grinding Head Speed	20-150rpm	20-150rpm	20-150rpm	20-150rpm
Grinding Disc Speed	50-600rpm	50-600rpm	50-600rpm	50-600rpm
Quantity	Single-disc	Single-disc	Single-disc	Single-disc
Size	10"/12"	10"/12"	10"/12"	10"/12"
Panel	Touch Panel	Touch Panel	Touch Panel	Touch Panel
Individual Loading Capacity	6	6	6	6
Central Loading Capacity	6 (9)	6 (9)	6 (9)	6 (9)
Maximum sample diameter	50mm	50mm	50mm	50mm
Liquid Dispensing (Optional)	4 or 8	4 or 8	4 or 8	4 or 8



Alpha-610/611

Automatic Grinder and Polisher

505mm 740mm

720mm 63Kg

- 10" / 12" work disc optional;
- Individual loading + central loading + **quantitative grinding***;
- 4/8 liquid dispensing outputs.

***Alpha-610 offers controlled material removal**



Alpha-660/661

Dual-Disc Automatic Grinder and Polisher

907mm 716mm

700mm 100Kg

- 10" / 12" work disc optional;
- Individual loading + central loading + **quantitative grinding***;
- 4/8 liquid dispensing outputs.
- Two independently work discs.

***Alpha-660 offers controlled material removal**

Dosing system

Various dispensing configurations are available for delivering all types of diamond suspensions. The system ensuresautomatic dosing at fixed intervals and predefined flow rates, enhancing both productivity and preparation consistency.



ADS-1 Automatic Dosing Unit
13.20.170



ADS-4 Automatic
13.20.175



ADS-4S Automatic
13.20.176



ADS-8 Automatic
13.20.180

Grinding Accessories



Specimen holder & levelling plate-Tear drop

25.03.550	25.4mm (9)
25.03.570	32mm (9)
25.03.580	40mm (6)
25.03.590	50mm (6)



Specimen holder for Individual Force

25.03.500	25.4mm (6)
25.03.510	30mm (6)
25.03.520	32mm (6)
25.03.530	40mm (6)
25.03.540	50mm (6)



Working wheel (taper fit)

25.03.071	8"(200mm)
25.03.081	10"(250mm)
25.03.091	12"(300mm)



Universal fixture
Sample holder diameter: 160mm
Maximum sample size: 120x30mm
Maximum sample height: 30mm
25.03.800 610-100



Irregular fixture
Sample holder diameter: 160mm
Maximum sample size: 50x50mm
Maximum sample height: 50mm
25.03.810 610-101



Locking fixture
Sample holder diameter: 160mm
Maximum sample size: 120x30mm
Maximum sample height: 30mm
25.03.820 610-102



Side locking fixture
Sample holder diameter: 160mm or 180mm
Maximum sample size: 50x30mm
Maximum sample height: 5mm
25.03.830 610-103
25.03.840 610-104



FLAT Levelling device
Sample holder diameter: 160mm or 180mm
Sample diameter: 25-50mm
Maximum sample height: 40mm
Sample exposure height: 3 or 5mm
15.02.004 FLAT-1



SF Pneumatic flattening device
Sample holder diameter: 160mm or 180mm
Sample diameter: 25-50mm
Maximum sample height: 40mm
Sample exposure height: 3 or 6mm
15.02.010 SF-1



Air Compressor
Capacity: 24L
Exhaust Pressure: 0.8Mpa
13.90.350



Recirculating water tank
Capacity: 45L
Exhaust Pressure: 5L/Min
25.01.040 Filtank60



SemiPOL High Precision Quantitative Grinding Machine



Dimension: 700x430x580mm Weight: 57Kg

SemiPOL is designed for precise grinding and polishing of a wide range of materials, including integrated circuits, semiconductor wafers, optical components, optical fibers, petrographic structures, and precision metal parts. It delivers micron-level accuracy, making it ideal for preparing samples for microscopic analysis (SEM, FIB, TEM, etc.). Key applications include parallel grinding, polishing, quantitative thinning, and continuous slicing. With a variety of accessories and fixtures, SemiPOL simplifies the grinding and polishing of complex and custom-shaped components.

Features

- Size: 8" (Φ203mm) or 10" (Φ254mm), flatness < 2μm;
- Disc rotation 0 ~350rpm, can be forward/reverse;
- Maximum removal: 10mm, resolution: 1μm, stable accuracy: ±2μm;
- 16 sets of process parameters can be saved and edited;
- Built-in automatic temperature sensing cooling fan to reduce failure rate and increase service life;
- Large diameter side discharge water outlet, not easy to clog and drain quickly;
- Pluggable faucet, convenient for cleaning and maintenance of the disk.

Technical Data

Model		SemiPOL
Working disk	Diameter	8"-10"(203/254mm)
	Speed	0-350rpm, continuously viable speed
	Direction	CW/CCW
	Power	750W
	Factory calibration	Flatness < 2μm
Sample movement head	Speed	0-50rpm, continuously viable speed
	Direction	CW/CCW
	Rotation	Yes, with adjustable amplitude
	Oscillation	Yes, amplitude and speed are adjustable
	Factory calibration	Perpendicularity to the disk <2μm; parallelism <2μm
	Maximum removal	10mm
Panel		7-inch touch screen

SemiPOL Accessories



Working Wheel
25.03.072 8"(200mm)
25.03.082 10"(250mm)



Flat Pasting Fixture
25.03.600 46-1000



Tear-drop Fixture
25.03.610 46-1001



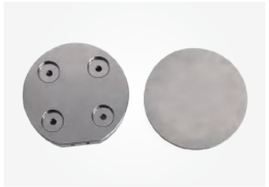
Multifunctional Fixture
25.03.620 46-1002



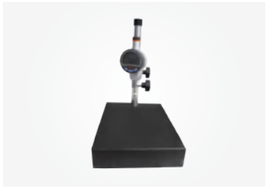
Side Sticking Fixture
25.03.630 46-1003
25.03.635 46-1005



Side Clamping Fixture
25.03.640 46-1004

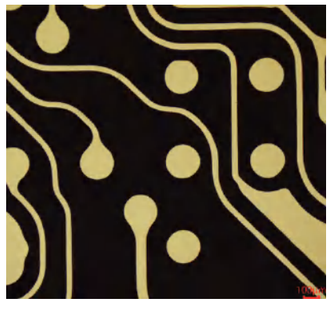


Flat Suction Fixture
25.03.605 46-1006

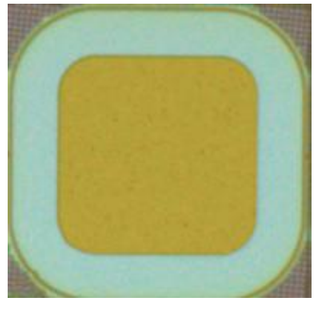


Digital Height Gauge
25.03.650 46-2000

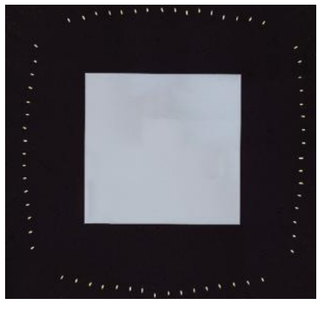
Case study



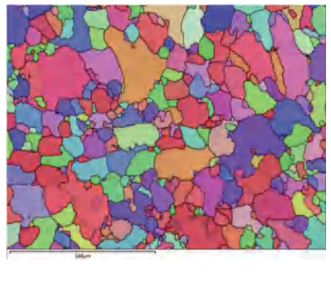
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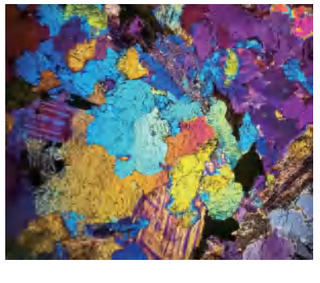
Semiconductor



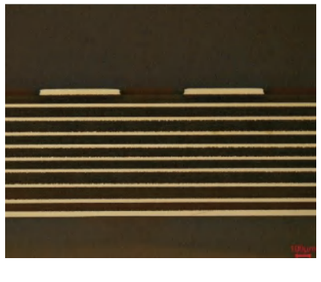
Wafer Thinning



7050 Aluminum Alloy EBSD



Petrographic Analysis



PCB Copper Layer



OPT-380 Automatic Precision Grinder and Polisher



Dimension: 653×771×338mm
Weight: 84Kg

The **OPT-380** offers exceptional overall performance, making it ideal for grinding and polishing sample preparation of a wide range of materials, including metals, ceramics, glass, PCBs, optical materials (such as zinc sulfide, silicon, and others), refractory materials, and composites. It is an excellent choice for both scientific research institutions and production enterprises. The Φ381mm disc is capable of preparing specimens with a diameter of up to Φ142mm or a rectangular sample with a diagonal length of up to 142mm.

Features

- The grinding disc can be convenient to replace as the swing arm can be quickly disassembled and assembled;
- Even longer service life as the motor adopts angular contact bearing instead of ball bearing;
- Can accurately control the working time (between 0-999H) with timing function;
- Can running long-term in low-speed with a cooling system;
- Convenient to operate on the 2.4 simple LCD screen.

Technical Data

Model		OPT-380
Working Wheel	Speed	10-200rpm
	Diameter	Φ380mm
	Station	Three station
Grinding Capacity	Specimen Size	Dia < Φ142mm
	Planeness	less-than 0.002mm per 20x20mm
Electrica	Voltage/Frequency	220V/50Hz
	Rated Power	800W
	Standby Power	15W
	Timer	0~999h59m59s
Water Supply	Max. pressure	0.6MPa
	Dia. on inlet pipe	Φ8mm
	Dia. on outlet pipe	Φ32mm



TG 100 Fixture for quantitative grinding
13.03.315



380 Glass Working wheel
25.03.095



380 Gray iron grinding disc
25.03.096



Handheld quantitative holder

25.03.490	TG-25.4
25.03.491	TG-30
25.03.492	TG-32



VP-430 Vibratory Polisher



Dimension: 518×570×384mm(Open: 518×663×686mm)
Weight: 53Kg

VP-430 vibration polishing machine can minimize the wearing of sample, eliminate surface stress, bring excellent flatness with less stress deformation. It is an ideal preparation equipment for EBSD (backscattered electron diffraction), AFM (atomic force microscope) & SEM (scanning electron microscopy) analysis and Nano indentation or micro-hardness testing. The equipment is particularly suitable for surface polishing on soft and ductile materials such as Titanium, Aluminium, pure Copper and Copper alloys, Aluminium alloys, steel and Nickel-based alloys.

Features

- Low power consumption& noise design with piezoelectric
- vibratory plate, light weight but stable in operation;
- Simple panel design, easy to operate;
- Easily replacement design on disc, convenient to change and clean;
- 7-inch touch screen interface, 20 customized programs can be saved;
- Automatically adjust frequency;
- Replaces electrolytic polishing, more environmentally friendly.

Technical Data

Model		VP-430
Working Plate	Diameter	12"(305mm)
	Sample Holder	1"/1.25"/1.5"/2" (customized according to customer needs)
Electrical	Voltage/Frequency	100~240V/50/60Hz
	Rated Power	50W
	Time Setting	9999hours
Rotation Speed		1-20rpm (Depends on the weight of the sample, here are the results for a single sample weighing about 150g)
Vibration Frequency		40~400Hz

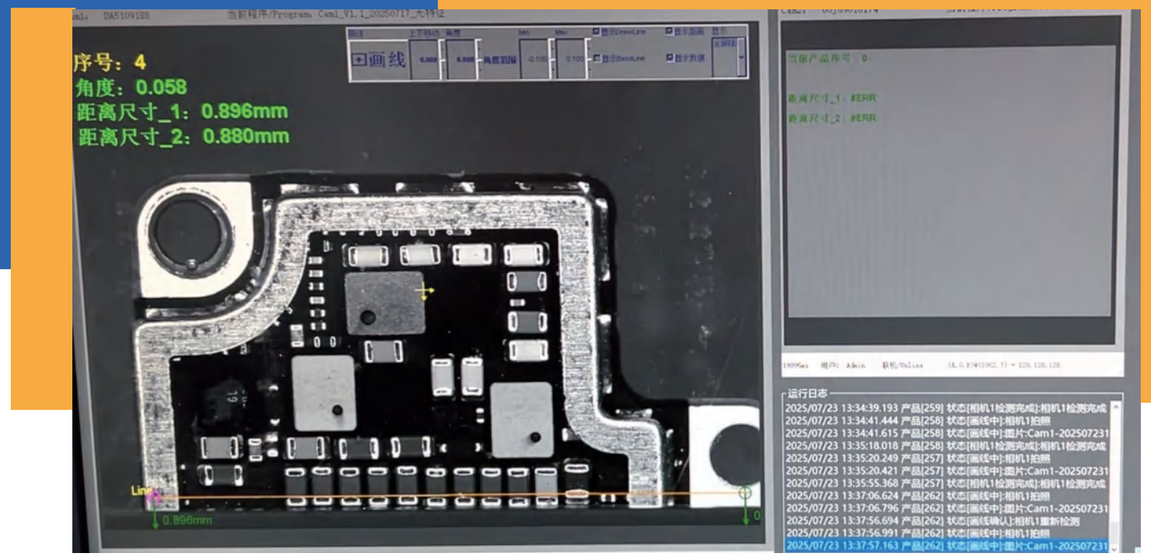


Levelling block
25.03.750 20-50mm



Specimen holder

25.03.700	25.4mm	25.03.710	30-32mm
25.03.720	40mm	25.03.730	50mm
25.03.740	20-22mm		



New!

WIT-1Fully Automatic Intelligent Sample Preparation System



Dimension: 1.3x2.5x2.3m

The WIT-1 Fully Automatic Intelligent Sample Preparation System is a special-purpose device for cross-section slicing and inspection in semiconductor, PCB and related industries.It is mainly used for precise positioning, inspection and analysis of hole copper, solder joints, solder balls and other key parts in semiconductor, SMT and PCB sectors. With high-definition CCD camera for accurate grinding position calibration, it automates the full process from rough grinding, fine grinding, fine polishing to cleaning, and achieves 10μm precise grinding control through AI technology.

Features

- Uses a high-precision CCD camera to calibrate the sample grinding position, with a grinding error of ±10μm;
- The pressure and speed of sample pressing can be controlled to avoid sample cracking and breakage caused by excessive pressure;
- Equipped with laser marking or coding for sample traceability;
- Dual working discs for automatic replacement of grinding discs; can hold up to 20 grinding discs;
- Configured with 4 sets of different polishing fluids, 2 of which have mechanical stirring functions, and all 4 sets have liquid level alarm functions;
- Equipped with a cleaning station including ultrasonic cleaning, water flow cleaning, and air drying;
- Processed samples are arranged in an orderly manner in the recovery box with the grinding surface facing up to avoid scratches on the grinding surface.

Technical Data

Model		WIT-1
Sample Mounting Box	Square shape	39x47x12mm, 30x27x12mm, maximum quantity 21
Alignment System	CCD Camera	25-megapixel
	Shooting Field of View	35x35mm
Moving Grinding Head	Motor Power	0.4Kw
	Rotation Speed	0-360° reciprocating swing
	Pressure	5-100N
Grinding/ Polishing Station	Grinding Station	2
	Grinding Disc Diameter	Ø254mm
	Rotation Speed	100-1000rpm
	Motor Power	1Kw
Cleaning	Cleaning Method	Ultrasound, water flushing, air blowing
Drip System	Drip Groups	4 groups x 1.8L



New!

MultiPol

Fully Automatic Grinding and Polishing Machine



尺寸：2500x810x2100mm

MultiPol is Trojan's new-generation fully automatic metallographic grinding and polishing sample preparation system, specifically designed for high-load, high-reproducibility industrial sample preparation scenarios, providing stable sample preparation guarantees for material microanalysis.The equipment adopts center-loading and pressure-applying technology, enabling quantitative grinding and precise control of the grinding amount with an accuracy of up to 0.1 mm. It is equipped with 6 sets of drip systems to ensure sample preparation uniformity, and is compatible with 250mm-300mm diameter grinding discs to meet diverse sample preparation requirements.

Features

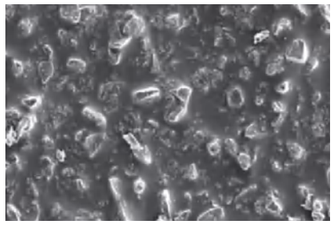
- Ultra-high sample preparation reproducibility.Core parameters such as pressure and rotation speed can be set automatically, minimizing human error to the greatest extent;
- Full-process standardized recipe: Key data including the number of fixture holders, sample preparation methods, consumable usage, and recipe duration are automatically stored;
- Efficient batch processing capability: Up to 8 sample fixture holders can be loaded at a time;
- User-friendly human-machine interaction design: The automatic drip system features a visual design and quick-connect structure.

Technical Data

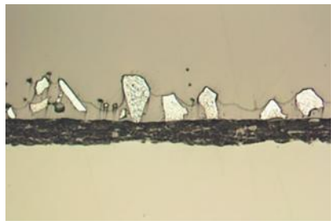
Model		MultiPol
Moving Grinding Head	Motor	0.75Kw
	Clamp Disk Speed	50-200rpm，CW，CCW
	Clamp Disk Diameter	Max. 180 mm
Pre-grinding Station	Motor	4.0Kw
	Speed	100–1500 rpm
	Grinding Amount Control	0.1–10 mm, accuracy ±0.1 mm
	Plate Trimming Control	50–200 μm
Polishing Station	Motor	2.2Kw
	Platen Speed	50-600rpm
	Platen Diameter	250mm, 300mm
Drip Station	Suspension	4×1 L, flow rate 0.1–35 mL/min
	Alumina/Silica Oxide	2×1.2 L, flow rate 0.5–54 mL/min
Cleaning	Cleaning Method	Ultrasonic + Water Washing

Abrasive Papers

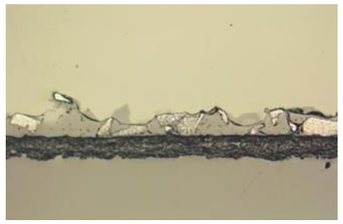
There are silicon carbide and alumina for choice, which has good waterproof, durable long lasting life with uniform cutting characteristics that minimizes sample distortion and deformation.



SiC particles SEM 50×



Unused abrasive paper (P120) 50×



Used abrasive paper 50×

Grain Size Chart for Metallographic Abrasive Papers

Grain Size (μm)	260	200	125	80	68	52	40	35	26	22	15	10	5
ANSI/UAMA(US)	#60	#80	#120	#180	#220	#240	#280	#320	#360	#400	#600	#800	#1200
FEPA P(Europe)	P60	P80	P120	P180	P240	P280	P360	P400	P600	P800	P1200	P2400	P4000

MET-F Metallographic Grinding Foil

Designed specifically for grinding ferrous and other black metals. Offers exceptional wear resistance with a lifespan more than three times that of standard SiC abrasive paper. Resistant to cracking and features a self-adhesive function, eliminating the need for clamping rings or backing adhesive, making it easy and quick to use.

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120	03.18.110	03.18.210	03.18.310	100pcs
180	03.18.120	03.18.220	03.18.320	100pcs
240	03.18.130	03.18.230	03.18.330	100pcs
320	03.18.140	03.18.240	03.18.340	100pcs
400	03.18.150	03.18.250	03.18.350	100pcs
600	03.18.160	03.18.260	03.18.360	100pcs
1200	03.18.170	03.18.270	03.18.370	100pcs



MET-S Silicon Carbide Abrasive Paper (non-adhesive)

Made with high-hardness silicon carbide as the abrasive. Suitable for grinding metal materials, electronic materials, and plastic samples.

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120	03.03.103	03.03.403	03.03.703	50pcs
180	03.03.104	03.03.404	03.03.704	100pcs
400	03.03.107	03.03.407	03.03.707	100pcs
800	03.03.109	03.03.409	03.03.709	100pcs
1200	03.03.111	03.03.411	03.03.711	100pcs
2000	03.03.113	03.03.413	03.03.713	100pcs
2500	03.03.114	03.03.414	03.03.714	100pcs
2400	03.03.115	03.03.415	03.03.715	100pcs
4000	03.03.116	03.03.416	03.03.716	100pcs



MET-SP Silicon Carbide Abrasive Paper (adhesive-backed)

Made with high-hardness silicon carbide as the abrasive. The back is coated with an adhesive layer for direct attachment to working platen, ensuring better flatness.Suitable for grinding metal materials,electronic materials, and plastic samples.

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120	03.04.203	03.04.503	03.04.803	50pcs
180	03.04.204	03.04.504	03.04.804	100pcs
400	03.04.207	03.04.507	03.04.807	100pcs
800	03.04.209	03.04.509	03.04.809	100pcs
1200	03.04.211	03.04.511	03.04.811	100pcs
2000	03.04.213	03.04.513	03.04.813	100pcs
2500	03.04.214	03.04.514	03.04.814	100pcs
2400	03.04.215	03.04.515	03.04.815	100pcs
4000	03.04.216	03.04.516	03.04.816	100pcs



MET-M Metallographic Abrasive Paper (non-adhesive)

Made with aluminum oxide as the abrasive,offering moderate hardness and high durability.Suitable for grinding metal materials,electronic materials, and plastic samples.

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
60	03.01.101	03.01.401	03.01.701	50pcs
120	03.01.103	03.01.403	03.01.703	50pcs
180	03.01.104	03.01.404	03.01.704	100pcs
240	03.01.104-1	03.01.404-1	03.01.704-1	100pcs
320	03.01.105	03.01.405	03.01.705	100pcs
400	03.01.106	03.01.406	03.01.706	100pcs
800	03.01.108	03.01.408	03.01.708	100pcs
1200	03.01.110	03.01.410	03.01.710	100pcs



MET-MP Metallographic Abrasive Paper (adhesive-backed)

Made with aluminum oxide as the abrasive,offering moderate hardness and high durability.Coated with an adhesive layer for direct attachment to the working platen, ensuring better flatness.Suitable for grinding metal materials,electronic materials, and plastic samples.

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
60	03.02.401	03.02.500	03.02.801	50pcs
120	03.02.403	03.02.503	03.02.803	50pcs
180	03.02.404	03.02.504	03.02.804	100pcs
240	03.02.404-1	03.02.504-1	03.02.804-1	100pcs
320	03.02.405	03.02.505	03.02.805	100pcs
400	03.02.406	03.02.506	03.02.806	100pcs
800	03.02.408	03.02.508	03.02.808	100pcs
1200	03.02.410	03.02.510	03.02.810	100pcs



Diamond Grinding Disc

DiaNi Electroplated Diamond Grinding Disc

Nickel - based diamond grinding disc, with extremely low elasticity and a high grinding rate. Same grinding speed for hard and soft materials ensures the flatness of the sample surface. Applicable to materials with high hardness.

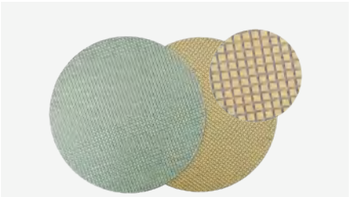
FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
80	04.21.110S	04.21.210S	04.21.310S	1pc
120	04.21.120S	04.21.220S	04.21.320S	1pc
200	04.21.125S	04.21.225S	04.21.325S	1pc
400	04.21.130S	04.21.230S	04.21.330S	1pc
800	04.21.140S	04.21.240S	04.21.340S	1pc
1200	04.21.150S	04.21.250S	04.21.350S	1pc



DiaRe Resin-Bonded Diamond Grinding Disc

Resin-based,low elasticity, excellent grindingsurface. Same grinding speed for hard and soft materials, ensuring the flatness of the sample surface. Suitable for materials with high hardness and brittleness.

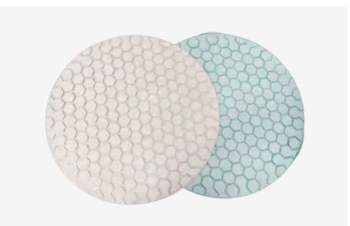
FEPA(Grit)	Color	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120		04.22.120S	04.22.220S	04.22.320S	1pc
200		04.22.125S	04.22.225S	04.22.325S	1pc
400		04.22.130S	04.22.230S	04.22.330S	1pc
800		04.22.140S	04.22.240S	04.22.340S	1pc
1500		04.22.150S	04.22.250S	04.22.350S	1pc
3000		04.22.160S	04.22.260S	04.22.360S	1pc
5000		04.22.170S	04.22.270S	04.22.370S	1pc



POS/POH Fine Grinding Disc

Used for fine grinding with diamond suspension or spray. Replace multiple grinding steps and save grinding time.
Extremely long service life and a high material removal rate.
Same grinding speed for both hard and soft materials, ensuring a flat surface of the sample.
POH: >150 HV hard material.
POS: 40 - 1500 HV soft to hard material.

Description	POS	POH	Package
8 inch(200mm)	04.09.110	04.09.130	1pc
10 inch(250mm)	04.09.115	04.09.135	1pc
12 inch(300mm)	04.09.120	04.09.140	1pc
14 inch(350mm)	04.09.125	04.09.145	1pc



PF Diamond Grinding Film

Diamond particles are evenly distributed, with excellent sharpness and consistent grinding force on hard and soft materials, ensuring sample flatness. Commonly used for unencapsulated cross - section grinding. Applied in transmission electron microscopy polishing, backside polishing, and focused ion beam sample thinning.

Micron	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
1μm	14.01.461-3	14.01.475-1	14.01.484-1	5pcs
3μm	14.01.462-1	14.01.476-1	14.01.485-1	5pcs
6μm	14.01.463-1	14.01.478-1	14.01.486-1	5pcs
9μm	14.01.464-1	14.01.477-1	14.01.483-1	5pcs
15μm	14.01.465-1	14.01.479-1	14.01.487-1	5pcs
30μm	14.01.466-1	14.01.481-1	14.01.488-1	5pcs



Adapter System

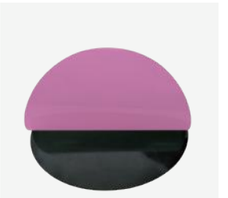
AD-PSA Adapter Disc



AD-PSA The adapter discs with a special coating allow for easy removal of PSA abrasive papers/polishing cloths without leaving any residue.

04.08.410	8inch(200mm)	1pc
04.08.413	10inch(250mm)	1pc
04.08.420	12inch(300mm)	1pc

AD-Foil Adapter Disc



AD-Foil Suitable for SiC film or diamond grinding film,washable and reusable.

04.08.422	8inch(200mm)
04.08.430	10inch(250mm)
04.08.432	12inch(300mm)

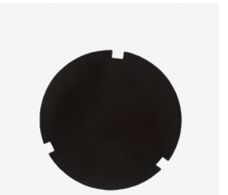
AD-PB Adapter Disc



AD-PB Suitable for PB abrasive papers or diamond grinding discs, featuring a reusable adhesive layer on the surface, allowing for easy attachment or removal of PB abrasive papers.

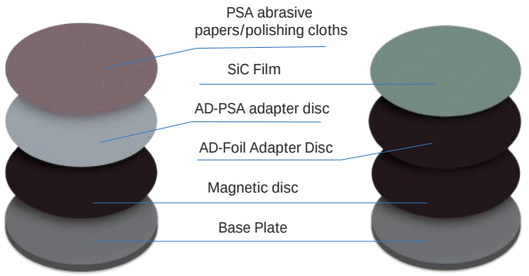
04.08.310	8inch(200mm)	1pc
04.08.320	10inch(250mm)	1pc
04.08.330	12inch(300mm)	1pc

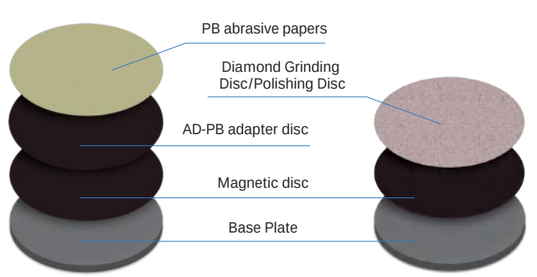
Magnetic Magnetic disc



The magnetic soft disc securely attaches to the base plate of the grinding machine, firmly holding the adapter disc in place.

04.08.010	8inch(200mm)
04.08.020	10inch(250mm)
04.08.030	12inch(300mm)





Polishing Cloth

NL-CP White Chemical Fiber Polishing Cloth (PSA)

White chemical fiber, suitable for coarse polishing of ferrous metals. Recommended for use with 6-15μm diamond polishing suspensionor spray.

Order No:	Description	Package
05.06.610	8inch(200mm)	10pcs
05.06.620	10inch(250mm)	10pcs
05.06.630	12inch(300mm)	10pcs

GF-JP White Synthetin Silk Polishing Cloth (PSA)

Suitable for intermediate or coarse polishing of ferrous metals. Recommended for usewith 3-9μm diamond polishing suspensionor spray.

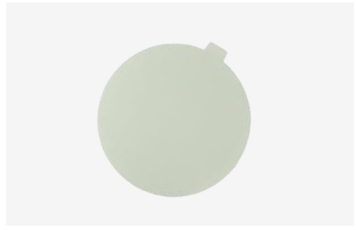
Order No:	Description	Package
05.10.010	8inch(200mm)	10pcs
05.10.020	10inch(250mm)	10pcs
05.10.030	12inch(300mm)	10pcs



SC-JP White Silk Polishing Cloth (PSA)

Suitable for fine polishing of cemented carbide and ferrous metals. Recommended for usewith 0.5-6μm diamond polishing suspension.

Order No:	Description	Package
05.05.510	8inch(200mm)	10pcs
05.05.520	10inch(250mm)	10pcs
05.05.530	12inch(300mm)	10pcs



YS-JP White Fiber Polishing Cloth (PSA)

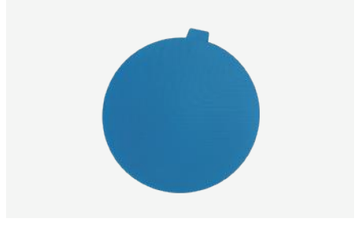
Suitable for fine or intermediate polishing of copper, aluminum, tin, and softer ferrous metals. Recommended for usewith 1-6μm diamond polishing suspension or diamond spray.

Order No:	Description	Package
05.07.710	8inch(200mm)	10pcs
05.07.720	10inch(250mm)	10pcs
05.07.730	12inch(300mm)	10pcs

CS-JP Blue Synthetin Silk Polishing Cloth (PSA)

Suitable for intermediate and fine polishing of ferrous metals, non-ferrous metals, coatings, and plastics. Recommended for use with 0.5-6μm diamond polishing suspension.

Order No:	Description	Package
05.12.110	8inch(200mm)	10pcs
05.12.120	10inch(250mm)	10pcs
05.12.130	12inch(300mm)	10pcs



SR-ZP Red Synthetic Fibric Polishing Cloth (PSA)

Suitablefor fine or final polishing of most materials. Recommended for use with 0.3-3μm aluminum oxide or diamond polishing suspension.

Order No:	Description	Package
05.02.150	8inch(200mm)	10pcs
05.02.160	10inch(250mm)	10pcs
05.02.170	12inch(300mm)	10pcs



ET-JP White Synthetic Velvet Polishing Cloth (PSA)

Suitable for fine polishing ofsoft materials such as copper,tin, resin, PCB, SMT, and semiconductors. Recommended for use with 0.05-3μm aluminum oxide polishing suspension or aluminum oxide polishing powder.

Order No:	Description	Package
05.03.210	8inch(200mm)	10pcs
05.03.220	10inch(250mm)	10pcs
05.03.230	12inch(300mm)	10pcs



YR-JP Brown Synthetic Rayon Polishing Cloth (PSA)

Suitable for fine polishing of ferrous and non-ferrous metals, composite materials,polymers, cast iron, ceramics, carbides, and PCBs. Recommended for use with 0.05-3μm diamond polishing suspension, aluminum oxide polishing suspension.

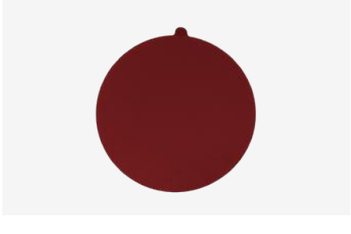
Order No:	Description	Package
05.04.310	8inch(200mm)	10pcs
05.04.320	10inch(250mm)	10pcs
05.04.330	12inch(300mm)	10pcs



Final Red Final Precision Polishing Cloth(PSA)

Suitable for precision polishing of electronic components, especially for preparing materialsf or SEM or TEM analysis. Recommended for use with 0.05μm silicaor 0.05 μm aluminum oxide polishing suspension.

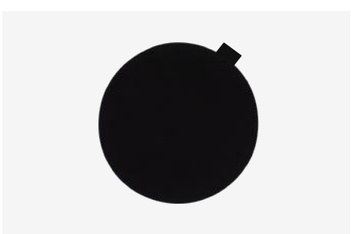
Order No:	Description	Package
05.13.110	8inch(200mm)	10pcs
05.13.120	10inch(250mm)	10pcs
05.13.130	12inch(300mm)	10pcs



ZN-ZP Black Polyurethane Polishing Cloth (PSA)

Suitable for final polishing of most materials.
Recommended for use with 0.02–1μm silica or aluminum oxide polishing suspension.

Order No:	Description	Package
05.01.110	8inch(200mm)	10pcs
05.01.120	10inch(250mm)	10pcs
05.01.130	12inch(300mm)	10pcs



Application Table

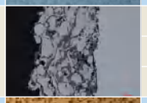
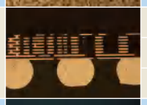
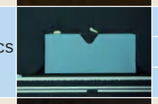
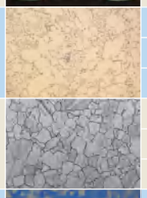
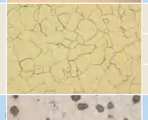
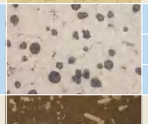
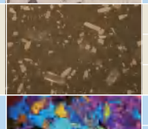
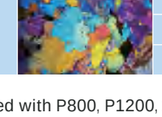
Model	Coarse Polishing		Intermediate Polishing				Final Polishing			
	NL-CP	GF-JP	SC-JP	YS-JP	CS-JP	SR-ZP	ET-JP	YR-JP	Final-Red	ZN-ZP
Recommended Grit	6~15μm	3~9μm	1~6μm	1~6μm	1~6μm	0.3~3μm	0.05~1μm	0.05~1μm	0.05~1μm	0.05~0.3μm
Alumina Polishing Suspension	-	-	-	★	★	★★	★★	★★	★★	★★
Silica Polishing Suspension	-	-	-	-	-	-	★	★	★★	★★
Diamond Polishing Suspension	★★	★★	★★	★★	★★	★★	★	★	-	-
Ceramics	★★	★	★★	-	★	★	★	★	-	★★
Hard Metals	★★	★★	★★	★	★★	★★	★	-	-	★★
Steel	★★	★★	★★	★★	★★	★★	★	★	★	★★
Composite Materials	-	★	★★	★	★	★	★★	★★	★★	★★
Minerals	★★	★	★	★	★★	★	★	★	-	★
Coating	-	★★	★	★	★★	★★	★★	★★	-	★★
Gray Cast Iron	★★	★★	★★	★★	★★	★★	★	★	-	★★
Copper Alloys	-	★	★	★★	★★	★★	★★	★★	★★	★★
Aluminum Alloys	-	★	★	★★	★★	★★	★★	★★	★★	★★
Soft Metals	-	★	★	★★	★★	★★	★★	★★	★★	★★
Non-ferrous Materials	-	★	★★	★★	★	★	★	★	-	★★
Electronic Materials	-	★★	★	-	★	★★	★★	★★	★★	★★
Plastics	-	-	★	-	★	★★	★★	★★	★	★★

★★ Excellent ★ Good

Recommended Method

Due to varying demands and applications, the polishing methods for each material differ. The following table presents the polishing methods recommended by TROJAN based on years of experience, which can yield excellent polishing results. For more detailed information and polishing techniques, please contact our company by phone or email us at sales@trojanchina.com, or visit our website at www.trojanworld.com.

Material Application

Material	Picture	Consumables	Coarse Grinding	Final Polishin	Polishing Step1	Polishing Step2	Polishing Step3
Ceramics		Grinding	DiaRe grinding disc P400	**POH disc	GF-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmSO-T401	/
		Abrasive/Lubricant and Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Metal Thermal Spray Coatings		Grinding	DiaRe grinding disc P400	*POS disc	SC-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Hard Metal		Grinding	DiaRe grinding disc P400	*POH disc	CS-JP polishing cloth	ZN-ZPpolishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Printed Circuit Board		Grinding	SiC Paper P400	SiC Paper P1200、P2500	SC-JP polishing cloth	SC-JP polishing cloth	ZN-ZP polishing cloth
		Grit	/	/	3μm PD-WT	1μm PD-WT	Super2
		Abrasive/Cooling	Water	/	Diamond Suspension	Diamond Suspension	Alumina Suspension
Microelectronics Silicon		Grinding	SiC Paper P400	SiC Paper P1200、P2500	SC-JP polishing cloth	SC-JP polishing cloth	ZN-ZP polishing cloth
		Grit	/	/	3μm PD-WT	1μm PD-WT	Super2
		Abrasive/Cooling	Water	/	Diamond Suspension	Diamond Suspension	Alumina Suspension
Microelectronic Materials		Grinding	SiC Paper P400	SiC Paper P1200、P2500	SC-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	/	3μm PD-WT	Super2	/
		Abrasive/Cooling	Water	/	Diamond Suspension	Alumina Suspension	/
Aluminum Alloy		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Nickel-based Superalloy		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Titanium Alloy		Grinding	SiC Paper P400	*POS disc	YS-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Copper and its Alloys		Grinding	SiC Paper P400	*POS disc	YS-JP polishing cloth	ET-JP polishing cloth	ZN-ZP polishing cloth
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-W	0.05μmAO-439
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Alumina Suspension	Silica Suspension
Hard Stee		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ZN-ZP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Soft Steel		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ET-JP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Cast Iron		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ET-JP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/
Polymer Matrix Composites		Grinding	SiC Paper P400	*POS disc	SC-JP polishing cloth	ET-JP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-W	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Alumina Suspension	/
Rock		Grinding	DiaRe grinding disc P400	**POS disc	GF-JP polishing cloth	ET-JP polishing cloth	/
		Grit	/	9μm PD-WT	3μm PD-WT	0.05μmAO-439	/
		Abrasive/Cooling	Water	Diamond Suspension	Diamond Suspension	Silica Suspension	/

*Can be replaced with P800, P1200, 2000, or 2500 silicon carbide sandpaper.

**Can be replaced with DiaRe P800 or P1500 diamond grinding discs.

Polishing Consumables

Diamond polishing suspension contains a high concentration of monocrystalline or polycrystalline diamond particles, along with lubricants. The diamond particles in the slurry are evenly distributed on the polishing cloth, ensuring stable and efficient polishing performance.

MD-WT Monocrystalline Diamond Polishing Suspension

Contains diamond micropowder and polishing additives. Diamond micropowder remains evenly suspended and does not settle over time. MD-WT is a monocrystalline diamond polishing suspension with fast polishing speed, reasonable price, and broad application.

Order No:	Description	Package
06.01.110-1	0.25μm	500ml
06.01.120-1	0.5μm	500ml
06.01.130-1	1μm	500ml
06.01.140-1	3μm	500ml
06.01.150-1	6μm	500ml
06.01.160-1	9μm	500ml



PD-WT Polycrystalline Diamond Polishing Suspension

Water-based, suitable for polishing most materials. Compatible with manual application or automatic drip systems. Can be used with polishing lubricants for improved results. Non-toxic, environmentally friendly formula. PD-WT is a polycrystalline diamond polishing suspension offering good surface finish with low consumption.

Order No:	Description	Package
06.02.210	0.25μm	500ml
06.02.220	0.5μm	500ml
06.02.230	1μm	500ml
06.02.240	3μm	500ml
06.02.250	6μm	500ml
06.02.260	9μm	500ml



Diamond Paste

Easy to use and store. High concentration and viscosity, use with lubricant. Non-toxic and environmentally friendly.

Monocrystalline (5g)		Polycrystalline (10g)	
06.10.030	1μm/Gray	06.10.110	1μm/Black
06.10.040	3μm/Gray	06.10.130	3μm/Black
06.10.050	6μm/Gray	06.10.160	6μm/Black
06.10.060	9μm/Gray	06.10.190	9μm/Black



SP-D Monocrystalline Diamond Spray

Easy to use, providing fast polishing results. Suitable for polishing steel and other ferrous metals.

Order No:	Description	Package
06.03.115	0.5μm	350ml
06.03.320	1μm	350ml
06.03.325	2.5μm	350ml
06.03.330	3.5μm	350ml
06.03.335	5μm	350ml
06.03.340	10μm	350ml



PL-W Polishing Lubricant

Water-soluble, designed for coarse, fine, and ultra-fine polishing of non-water-sensitive materials when paired with polishing liquids.Reduces friction during polishing, prolonging the lifespan of polishing cloths.

Order No:	Description	Package
06.09.510	Liquid	500ml
06.09.520	Liquid	1000ml



PL-WB Water-free Blue Low-viscosity Polishing Lubricant

Alcohol-soluble formula, suitable for water-sensitive materials in coarse, fine, and ultra-fine polishing processes. Reduces polishing cloth abrasion, extends service life of polishing cloths, and ensures thorough cleaning ease.

Order No:	Description	Package
06.09.640	Liquid	500ml
06.09.650	Liquid	1000ml
06.09.630	Liquid	5000ml



AO-W Alumina Polishing Suspension

Water-based alumina suspension. Suitable for polishing soft metals such as copper, tin or plastic materials like PCB, SMT, and semiconductors.

Order No:	Description	Package
06.04.210	0.05μm	500ml
06.04.220	0.3μm	500ml
06.04.230	1μm	500ml



AO-P Alumina Polishing Powder

Agglomerated Alumina Polishing Powder. Offers a high removal rate. Suitable for pure lead, pure magnesium, as well as lead alloys and magnesium alloys.

Order No:	Description	Package
06.13.011	0.05μm	500g
06.13.021	0.3μm	500g
06.13.031	1μm	500g



Super Alumina Polishing Suspension

Non-agglomerated, gel alumina suspension. Ideal for polishing minerals, ferrous metals, carbides, precious metals, printed circuit board electronic components, and polymers, providing excellent results.

Order No:	Description	Package
06.04.410	0.05μm	500ml
06.04.414	0.05μm	1.9L



Super Alumina Polishing Powder

High-quality non-agglomerated alumina powder. Providing excellent surface finish.- Suitable for PCBs, semiconductors, and most minerals and metals.

Order No:	Description	Package
06.14.010	0.05μm	1LB
06.14.020	0.3μm	1LB



SO-T401 Colloidal Silica Polishing Suspension

Fine 0.05μm Amorphous Colloidal Silica Polishing Suspension PH ~10.5.
Gently removes material without deformation through chemical mechanical polishing.
Used for final polishing of materials such as iron, steel, and titanium.

Order No:	Description	Package
06.05.310	50nm	500ml
06.05.320	50nm	1000ml
06.05.350	50nm	1.9L



SO-A439 Colloidal Silica Polishing Suspension

Fine 0.05um Silica Suspension, PH ~10.2
Provides excellent surface fnish throughchemical mechanical polishing.
Used for fnal polishing of materials such astin,aluminum,semiconductor,PCB and others.

Order No:	Description	Package
06.07.310	50nm	500ml
06.07.320	50nm	1000ml
06.07.322	50nm	1.9L



SO-A539 Colloidal Silica Polishing Suspension

Fine 0.05um Silica Suspension, PH ~10.2
Provides excellent surface fnish throughchemical mechanical polishing.
Jsed for fnal polishing of materials such asefractory metals, minerals and ceramics.

Order No:	Description	Package
06.07.522	50nm	500ml
06.07.520	50nm	1000ml
06.07.524	50nm	1.9L





Image Analysis

Advanced microscope products are compatible with specific digital imaging devices, ensuring high-resolution images and precise color reproduction. Users can create custom work protocols to meet the workflow requirements of different environments and other needs. While focusing on their tasks, users are provided with a range of convenient, time-saving tools, making routine tasks easier and more efficient.

MV 30 Inverted Metallurgical Microscope with Brightfield Illumination

Designed for materials education, routine applications, and fundamental metallographic research in laboratories. The superior optical system, paired with a wide-field flat-field eyepiece, enables students to observe the finest details in metallographic and materials analysis. The user-friendly coarse and fine coaxial focusing mechanism ensures students can focus on the experiment itself. Its compact design allows for easy storage, saving laboratory space, and it is suitable for brightfield observation, meeting the needs of daily teaching and laboratory applications. Brightfield / Encoding / Light Intensity Memory / Polarization (optional).



Technical Data

Model	MV 30
Optical System	Infinity-Corrected Optical System with Chromatic Correction, 45mm optical path length
Trinocular Viewing Head	Infinity-Corrected Hinged Trinocular Viewing Head, Interpupillary distance adjustable from 50 to 75mm, ±5 diopter adjustment on one eyepiece, Two-position light split ratio: R:T = 100:0 or 0:100
Eyepieces	High Eyepoint Wide-Field Plan Eyepiece, SWH10X23mm (Diopter adjustable)
Objectives	Brightfield Metallurgical Objectives（5x、10x、20x、50x、100x）5XNA0.15WD12.10XNA0.3WD16.20XNA0.40WD12,50XNA0.55WD8.5，100XNA0.8WD2.1（100X optional）
Frame	Equipped with polarizer sslot, featuring light intensity memory function
Objective Revolver	5-Position Coded Brightfield Objective Revolver The coded objective revolver integrates the microscope's hardware setup with the Omex image analysis software. The magnification of the objective is displayed on the screen, and when changing magnification, the calibration values stored in the software are automatically adjusted, eliminating measurement errors caused by forgetting to switch magnification in the software.
Coarse and Fine Focusing Mechanism	Equipped with a low-position coarse and fine coaxial focusing mechanism, the coarse focusing travel is 9mm, with upward movement of 6.5mm and downward movement of 2.5mm. The fine focusing precision is 0.002mm, and it is equipped with a tightening adjustment knob to prevent slipping.
Stage	Double-layer mechanical moving stage with a platform size of 215mm × 165mm. The stage features low-position coaxial X and Y-axis adjustments with a travel range of 45mm × 35mm.
Camera Interface	Photography and imaging accessory: 0.5X C-mount, adjustable focus.
Other Accessories	4K high-definition imaging system, USB 3.0 desktop imaging system, equipped with cameras (5MP, 6MP, 12MP, 20MP, etc.).
	High-precision micrometer, with a graduated scale of 0.01mm.
	Software (professional measurement system, metallographic analysis system, particle analysis system, porosity analysis system, welding-specific measurement system, etc.)

MV 70 Brightfield/Darkfield Inverted Metallurgical Microscope



The **MV 70** Inverted Metallurgical Microscope is an innovative, intelligent product featuring a modular design for enhanced comfort. It offers various observation methods to meet diverse customer needs, bringing a revolutionary breakthrough to laboratory and metallurgical material analysis applications. Main functions: Supports various observation methods, including brightfield, darkfield, polarization, and differential interference contrast (DIC).

Technical Data

Model	MV 70
Optical System	Infinity-corrected achromatic optical system, with a working distance of 45mm.
Trinocular Viewing Head	Infinity-corrected hinged trinocular eyepiece tube, with interpupillary distance adjustment range of 50mm to 75mm and diopter adjustment range of ±5 diopters per side. Features two selectable light splitting ratios: R:T=100:0 or 0:100.
Eyepieces	High-eyepoint wide-field plan eyepiece CFI 10X22mm (diopter adjustable)
Objectives	Brightfield and darkfield metallurgical objective lenses（5x、10x、20x、50x、100x）5XNA0.15WD14.8, 10XNA0.3WD8.5, 20XNA0.40WD11.9, 50XAPO-NA0.75WD4, 100X APO-NA0.90 WD1（100X optional）
Frame	Equipped with brightfield/darkfield switch, polarization filter slot, and LCD display for light intensity and objective magnification.
Objective Revolver	5-hole coded brightfield/darkfield objective lens changer (with DIC slot). The coded objective lens changer integrates the microscope's hardware settings with Omnitron image analysis software. The magnification is displayed on the screen, and the software automatically adjusts the calibration values when the magnification is changed, eliminating measurement errors caused by forgetting to switch magnification in the software.
Coarse and fine focus mechanism	Coarse and fine focus mechanism with low-position coaxial design, coarse focusing range of 9mm (upward 6.5mm, downward 2.5mm), fine focus accuracy of 0.002mm, and a tension-adjustable knob to prevent slipping.
Stage	Dual-layer mechanical stage with low-position coaxial X and Y axis controls, featuring a bi-functional glass stage plate for both transmitted and reflected light.
Camera Interface	Imaging accessory: 0.7X C-mount, adjustable focus.
Other Accessories	4K high-definition imaging system, USB 3.0 PC-based imaging system, cameras (5MP, 6MP, 12MP, 20MP, etc.). High-precision micrometer with a resolution of 0.01mm. Software (Professional measurement system, metallographic analysis system, particle analysis system, porosity analysis system, welding-specific measurement system, etc.).



MR 43 Research-Grade Metallurgical Microscope



The MR 43 encoded metallurgical microscope integrates hardware settings with image analysis software. Objective magnification is displayed on screen and automatically synchronized with the software calibration, eliminating errors caused by incorrect magnification settings.
The MR 43 features an illumination memory function that stores the light intensity for each objective. When switching objectives, the system automatically adjusts the brightness, reducing eye strain and improving workflow efficiency.

Technical Data

Model	MR 43
Optical System	Infinity-Corrected Optical System
Viewing Head	Inverted trinocular viewing head with infinity-corrected optics, adjustable interpupillary distance (50–76 mm), and two-position light split (100:0 / 50:50)
	Erect trinocular viewing head with infinity-corrected optics, adjustable interpupillary distance (50–76 mm), and two-position light split (100:0 / 0:100)
Eyepiece	High eyepoint wide-field plan eyepiece SWH10X25MM, with adjustable diopter
	High eyepoint wide-field plan eyepiece SWH10X23MM, with adjustable diopter
Objective lenses	Professional infinity-corrected semi-apochromatic metallurgical objective lenses (5X, 10X, 20X, 50X, 100X)
	Infinity-corrected long working distance full-apochromatic metallurgical objective lenses (10X, 20X, 50X, 100X)
Objective Lens Revolver	5-position encoded adjustable bright/dark field objective turret (with DIC slot)
	The encoded objective turret integrates the microscope hardware with image analysis software, displaying the objective magnification and automatically adjusting the calibration values, preventing measurement errors from not switching magnification
	5-position motorized brightfield-darkfield objective turret (motorized/with DIC slot)
Frame	Transmitted and reflected light dual-use frame, low-position coarse and fine coaxial focusing mechanism with a coarse focus travel of 27mm and fine focus precision of 0.001mm. Equipped with an anti-slip tension adjustment device and a random upper limit stop. Includes a platform height adjustment mechanism, with a maximum sample height of 40mm
Stage	3X2 dual-layer mechanical moving stage, low-position coaxial X and Y direction adjustment; platform size: 240x175mm, working surface: 135x125mm, glass surface: 101x101mm, travel range: 75mmx50mm. Metal stage plate for reflection observation and dual-use glass stage plate for transmitted and reflected light are available
	Right-hand 4-inch mechanical stage, travel range: 105mm x 102mm, coaxial X and Y direction adjustment; can be equipped with a light-blocking plate for the transmitted light system, includes a glass stage plate
Upper illumination system	Adaptive wide voltage reflection light chamber, 10W LED warm light source, Kohler illumination, with adjustable field and aperture diaphragms
Bottom illumination system	Adaptive wide voltage, transmission light chamber, 0W LED warm light source
Condenser lens	Retractable achromatic condenser (N.A 0.9) for transmitted light, with adjustable aperture diaphragm
Additional Accessories	Imaging accessories with 1X, 0.65X, and 0.5X C-mount, focus adjustable
	4K High-Definition Imaging System, USB 3.0 PC-based Imaging System, Cameras (5MP, 6MP, 12MP, 20MP, etc.)
	High-precision micrometer scale with a graduation value of 0.01 mm
	Software: professional measurement system, metallographic analysis system, particle analysis system, porosity analysis system, and dedicated welding measurement system

MN 80Series Metallographic Microscope



The **MN 80** Series Metallographic Microscope makes metallographic examination easier, more convenient, and more efficient. With an ergonomic design, it ensures comfortable operation; specifically designed for metallographic analysis, it guarantees high resolution and accurate color reproduction, revealing every detail with precision. Trojan continues to provide innovative ideas, solutions, and technical support across various industries, including metallographic testing, semiconductor wafers, flat-panel displays, and electronics.

Technical Data

Model		MN 80
Optical System	Infinity-corrected Optical System	●
Optical Magnification	50x to 500x (Optional 500x/1000x)	●
Digital magnification	150x-1500x (21.5" Display)	●
Industrial Camera	12 Megapixel 1/1.8-inch Sony Color Industrial Chip (Optional 6 Megapixel and 20 Megapixel)	○
Observation Tube	Erect Image, Infinity Optical System Hinge-Type Trinocular Observation Tube, Interpupillary Distance Adjustment: 50mm–76mm, Two-Position Light Split Ratio: Binocular: Trinocular = 100:0	○
	Inverted Image, Infinity Optical System Hinge-Type Trinocular Observation Tube, Interpupillary Distance Adjustment: 50mm–76mm, Two-Position Light Split Ratio: Binocular: Trinocular = 100:0	●
Eyepiece	High Eyepoint Wide-Field Eyepiece SWH10X-H/23mm, with Adjustable Diopter	●
	High Eyepoint Wide-Field Eyepiece SWH10X-H/25mm, with Adjustable Diopter	○
Objective Lens	Infinity-corrected fluorite semi-apochromatic bright/dark field objective, 45mm visible light metallographic objective, 5X NA0.15 WD20.0mm	●
	Infinity-corrected fluorite semi-apochromatic bright/dark field objective, 45mm visible light metallographic objective, 10X NA0.30 WD11.0mm	●
	Infinity-corrected fluorite semi-apochromatic bright/dark field objective, 45mm visible light metallographic objective, 20X NA0.45 WD3.0mm	●
	Infinity-corrected fluorite semi-apochromatic bright/dark field objective, 45mm visible light metallographic objective, 50X NA0.8 WD1.0mm	●
	Infinity-corrected fluorite semi-apochromatic bright/dark field objective, 45mm visible light metallographic objective, 100X NA0.9 WD1.0mm	○
Nosepiece	5-position bright/dark field objective changer with DIC slot	●
	5-position motorized bright/dark field objective turret with DIC slot	○
Illumination system	Reflective stand, low-hand position coarse and fine coaxial focusing mechanism. Coarse focusing stroke: 35mm, fine focusing precision: 0.001mm. Equipped with adjustable tension mechanism to prevent slipping and upper limit stop. Builtin 100-240V wide voltage system, digital dimming with light intensity setting and reset functions	●
Specimen Stage	4-inch Specimen Stage, Platform Area: 310 x 240 mm, Travel Range: 100 mm x 100 mm, Coaxial Adjustment in X and Y Directions.	●
Condenser	Swing-out Achromatic Condenser (N.A. 0.9)	●
Episcopic Illuminator	Brightfield/Darkfield Reflected Light Illuminator, equipped with an adjustable aperture diaphragm, field diaphragm, centerable optics, filter slot, and slots for polarizer/analyzer	●
Illuminator Housing	10W Adjustable LED Lamp Housing, suitable for both transmitted and reflected light, pre-centered.	●
Camera Adapter	Photography and Imaging Accessories: 0.65X, C-mount interface, adjustable focus (optional 0.5X/1X)	●
Polarizing Component	Polarizer Insert Plate, 360° Rotatable Analyzer Insert Plate	●
Computer	Branded Computer and Monitor	○
Measurement Software	Measurement Software OMT-1.5D: Software-controlled electric objective turret, image capture, video recording, measurement, real-time image stitching, and depth-of-field fusion	○
Scale	High-Precision Micrometer Scale, Graduation Value: 0.01 mm	○

● Standard / ○ Optional

MTV 03 Integrated Video Microscope



MTV 03 Integrated Video Microscope offers advantages such as automatic magnification recognition, digital zoom, ease of observation, convenient data storage, and intelligent operation, significantly reducing fatigue during prolonged use. With a single button press, users can instantly access high-definition video imaging, delivering a fast and comfortable user experience.



Features

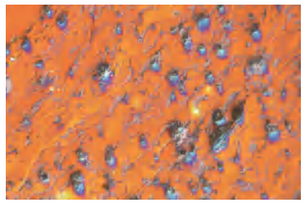
- Equipped with a 2-megapixel CMOS high-definition image sensor and paired with a 12-inch highdefinition LCD screen (resolution: 1920 × 1080), the system achieves a frame rate of 60 fps. With low image noise and high contrast, it not only ensures exceptional clarity but also delivers a smooth and lagfree observation experience.
- With a user-centric design, the horizontal magnification adjustment allows users to comfortably rest their elbows on the workbench during focusing and magnification changes, optimizing the tactile experience of operation.
- Featuring more powerful software capabilities, it supports a variety of measurement functions, including length, perimeter, area, radius, angle, and more, all easily calculated. Additionally, it allows personalized settings for line width, color, and font of measure-ment targets. The user-friendly and efficient flat-design interface ensures a seamless and intuitive operation experience.
- With expanded storage capacity, it supports external USB drive (2.0) storage, accommodating up to 128 GB. Real-time image saving ensures your storage and recording needs are fully met.

Technical Data

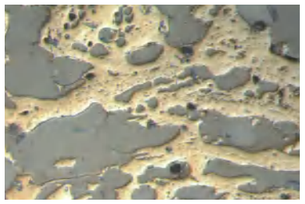
Model	MTV 03
Features	Features an encoded lens with direct magnification display. Software auto-adjusts to magnification changes, enabling direct and accurate measurements
Magnification	12x-77x / 20x-135x
Objective lens	0.75X-4.5X continuous zoom, objective lens zoom ratio 6.4:1
Sensor	1/2"COMS
Resolution	1920*1080P@ 60FPS(200万)
Output Interface	HDMI、USB
Display	11.6"/21.5"
Function	Real-time observation, photography, video recording, measurement, storage, data output
Base bracket	320*260mm（Various base brackets can be optionally selected according to requirements, see the base bracket component diagram for details.)
Illumination	Adjustable LED Light Source (Optional fluorescent or LED ring light)
Power Supply	External Wide Voltage Adapter, Input: 100V-240V AC 50/60Hz, Output: DC 12V 2A

Leica DM2700M Advanced LED Illumination Upright Microscope

DM2700M is a versatile upright microscope designed for brightfield, darkfield, differential interference contrast (DIC), polarization, and fluorescence applications. In addition to reflected light observation, it offers high optical resolution for detecting even the finest surface defects. Consistent LED illumination with a fixed color temperature ensures accurate and reproducible color representation during sample analysis.



A 500x Magnification View of an Annealed Brass Coating Sample under LED Oblique Illumination



A 200x Magnification View of a Plastic Composite Sample with a ThreeDimensional Appearance Created by Oblique Illumination.



Features

- Features three optional objective turrets: BF/DF M32 microscope nosepiece can accommodate up to five objectives, while the BF/FLUO configuration supports up to six or seven objectives.
- Suitable for samples up to 100 × 100 mm in size, such as metal sheets, semiconductor wafers, or printed circuit boards, with a maximum thickness of 80mm, for example, machined parts. Comprehensive testing programs can be used for monitoring.
- TheMacroobjectivelensallowsyoutoviewa40mmsampleataglance, making it an ideal tool for quick positioning and comprehensive documentation.

Technical Data

Model	Leica DM2700M
Stand	Robust metal stand
Infinity optical system	Two-gear focusing mechanism (with top focus brake system, coarse/fine adjustment with 1-micron micrometer scale) or three-gear focusing mechanism (with top focus brake system, coarse/medium/fine adjustment with 1-micron and 4-micron micrometer scales). Both systems feature torque-controlled coarse focusing and adjustable stage height stop mechanism.
Stage Travel	25mm
Incident light	The robust incident light axis with a 4-position reflector turret is designed for brightfield, darkfield, differential interference contrast (DIC), polarization, and fluorescence observations.
Objective Turret / Objectives	5x BF/DF M32, 6x BF M25, and 7x BF M25 Objective Turrets
Accessories	Optional Magnification Changing Device (1x, 1.5x, 2x) Fixed Ergonomically Designed Stage (76 × 50 mm), with either left or right-hand operation or rotating stage (76 × 50 mm), and equipped with a wear-resistant ceramic surface (standard configuration), enabling tasks that require stage supports and condenser holders. Optional stage for X, Y, and Z axis measurements is available.
Transmitted Light	LED illuminator with internal light intensity control Compatible with a built-in 32mm diameter three-position filter holder Suitable for wide-range condensers for incident light applications
Power Supply	Stable universal power supply with an operating voltage range of 90-230V

Hardness Tester

HRS-150ZD Automatic Rockwell Hardness Tester



The **HRS-150ZD** is a fully automatic Rockwell hardness tester with electronic control. Once the start button is pressed, the worktable rises automatically. As soon as the sample contacts the indenter, the system applies the test force and displays the hardness value automatically—ensuring fully automated testing from start to finish. This model supports a wide range of Rockwell hardness tests and features a modern design, comprehensive functionality, intuitive operation, and stable, reliable performance.

Features

- TheHRS-150ZD is a fully automatic, electronically controlled Rockwell hardness tester.With one-touch operation, the worktable rises automatically. Upon contact with the indenter, the system applies the initial and main test forces, completes the test cycle, and displays the hardness result automatically—ensuring fast, hands-free operation;
- The tester supports 21 Rockwell scales, including 15 standard Rockwell hardness scales (HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV) and 6 superficial Rockwell scales (HR15N, HR30N, HR45N, HR15T, HR30T, HR45T), with automatic conversion among them;
- Designed for ease of use, the interface features a simple and intuitive control panel. The system automates the entire testing process—including force application, holding, and unloading—with automatic force compensation for improved accuracy. Hardness values across high, medium, and low ranges are auto-corrected for optimal precision. Equipped with an RS232 interface for easy connection to a computer for data output.

Technical Data

Model	HRS-150ZD
Rockwell test force	60、100、150kgf
	588.4、980.7、1471N
Surface Rockwell test force	15、30、45kgf
	147.1、294.2、441.3N
Indenter specifications	Diamond Rockwell indenter (cone) φ1.588mm Tungsten carbide spherical indenter
Hardness reading	Large touchscreen display
Measuring scale	HRA;HRB;HRC;HRD;HRE;HRF;HRG;HRH;HRK;HRL;HRM;HRP;HRR;HRS;HRV ;HR15N;HR30N;
Conversion scale	HRA;HRB;HRC;HRD;HRF;HR15T;HR30T;HR45T;HR15N;HR30N;HR45N;HV;HB
Maximum allowable sample height	180mm
Distance from the center of the indenter to wall	160mm
Resolution	0.1HR
Holding Time	0~99s
Data Output	Built-in Printer, RS232 Interface
Maximum Specimen Height	Small Testing Table: 255mm, Large Testing Table: 240mm
Power Supply	AC220V，50Hz
Dimensions	510x290x730mm
Weight	95kg

7MHVS-1000A Digital Micro Vickers Hardness Tester with Touchscreen & Auto Turret



The **7MHVS-1000A** is specifically designed for micro Vickers hardness testing of metals and selected non-metallic materials. It is suitable for a wide range of applications, including machined components, forgings, cast iron, cast steel, non-ferrous metals, heat-treated parts, as well as small or thin specimens, glass, ceramics, agate, and gemstones. The system also supports testing of surface-hardened layers, such as carburized and quenched zones, coatings, surface treatments, and heat-affected zones in welds. Additionally, it enables observation of the internal metallographic structure, with integrated image capture, display, and printing functions. The 7MHVS-1000A is particularly well-suited for analyzing hardness gradients and evaluating surface hardness and effective hardening depth, especially in heat-treated gears and similar components.

Features

- The instrument's unique andprecise design ensures clearer indentation imaging and improved measurement accuracy;
- The newly designed 7-inch color touchscreen features a user-friendly, menu-driven interface that allows directselection of the hardness scale (HVor HK) and automatic calculation and display of test results. The system also supports automatic conversion between different hardness scales;
- Equipped with a 10× digital measuring microscope and a 40× objective lens, the system extends the measurement range and broadens its application scope. The largetouchscreen provides a clear and intuitive user experience, displaying key testing parameters such as test method, test force, indentation length, hardness value, dwell time, number of measurements, date, time, and converted-hardness values;
- Additional features include scale conversion, data storage, and report printing. The system supports automatic switching between indenters and objective lenses, ensuring precise positioning and enhanced operational efficiency. Threaded interfaces are provided for easy integration with digital or CCD cameras, enabling seamless connection to a computer and hardness analysis software.

Technical Data

Model	7MHVS-1000A
Testing Force	10gf (0.098N)、25gf (0.245N)、50gf (0.49N)、100gf (0.98N)、200gf (1.96N)、300gf (2.94N)、500gf(4.9N)、1kgf (9.8N)
Minimum Test Increment	0.025μm Electronic Measuring Eyepiece
Scale Conversion	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Hardness Testing Range	5~3000HV
Method of Applying Test Force	Automatic (Loading, Holding, Unloading)
Magnification of the Testing Microscope	100X (Observation) / 400X (Testing)
Holding Time for Test Force	1~60s
X-Y Stage	Dimensions: 100 x 100 mm, Maximum Travel: 25 x 25 mm
Data Output	LCD Display Readout, Built-in Printer
Maximum Specimen Height	110mm
Distance from Indenter Center to Outer Wall	110mm
Power Supply	AC220V+5%, 50-60Hz
Dimensions	320x500x570mm
Weight	40kg

HBST-3000Z Image Analysis-Based Brinell Hardness Tester

The **HBST-3000Z** Computerized Brinell Hardness Tester features a cast-iron body for enhanced rigidity and high measurement accuracy. Its precision-engineered structure uses a force sensor for direct control of the test force, enabling a compact design and ensuring smooth, stable application and release of force. This tester is ideal for measuring the hardness of cast iron, steel, non-ferrous metals, soft alloys, as well as hard plastics, bakelite, and selected non-metallic materials.



Features

- An industrial tablet PC is mounted on the machine body, equipped with an industrial-grade camera and CCD image processing software. It supports bothmanual and automatic image measurements, and allows direct export of test data and images, ensuring efficient and user-friendly operation;
- Thetesting process is CPU-controlled, with automatic switchingbetween the objective lens and indenter. Mechanical and electronic coordination ensures precise alignment and improved positioning accuracy. The built-in touchscreenand microprocessor provide intuitive parameter settingsand real-time result display for enhanced usability;
- Thesystem offers 11 levels of test force, supports 15 Brinell hardness scales and 14 conversion scales, making it suitable for awide range of metallic materials;
- Integrated with a Windows 7-based computer, the tester includes full PC functionality.Test results can be automaticallyexported into Word or Excel reports, with options for direct saving or printing.

Technical Data

Model	HBST-3000Z
Testing Force	31.25kgf , 62.5kgf , 100kgf , 125kgf , 187.5kgf , 250kgf , 500kgf 750kgf , 1000kgf , 1500kgf , 3000kgf (306.45N , 612.9N , 980.7N , 1266N ,1839N , 2452N , 4903N , 7355N , 9807N , 14710N , 29420N)
Measurement Scale	BW2.5/31.25 , HBW2.5/62.5 , HBW5/31.25 , HBW5/62.5 , HBW5/125, HBW10/100 , HBW10/125 , HBW2.5/187.5 , HBW5/250 ,HBW10/250 , HBW10/500 , HBW5/750 , HBW10/1000 , HBW10/1500 , HBW10/3000
Hardness Testing Range	8~650HBW
Method of Applying Test Force	Automatic (Loading / Holding / Unloading)
Hardness Reading	8-inch Integrated Touchscreen, 14-inch Touchscreen All-in-One Computer
Camera Resolution	3 Megapixel Resolution
Conversion Scale	HRA、HRB, HRC, HRD, HRF, HV , HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Data Output	Integrated Printer with RS232 Interface
Switching Between Objective Lens and Indenter	Automatic Switching
Micrometer	20X Digital Measuring Eyepiece
Smallest Scale Value of the Micrometer Drum	0.001mm
Holding Time	0~60S
Distance from the Center of the Indenter to Wall	150mm
Maximum Sample Height	280mm
CCD Measurement Method	Automatic or Manual
Power Supply	AC220V 50HZ
Applicable Standards	ISO 6506，ASTM E10，JIS Z2243，GB/T 231.2
Dimensions	580x560x930mm
Weight	135kg

Laboratory Setup

Trojan specializes in the planning, design, production, sales, and technical support of high-end metallographic laboratories. We provide comprehensive laboratory solutions for research fields such as PCBs, semiconductors, composite materials, powder metallurgy, automotive parts, aerospace, universities, and research institutions. Our services include laboratory planning and design, ventilation systems, laboratory furniture systems, laboratory renovation, as well as laboratory equipment and metallographic materials.Our team possesses extensive industry experience and professional expertise, having served numerous large-scale laboratory projects in China. With professional services, leading technology, and international standards, we are committed to developing laboratories that are forward-looking, flexible, and sustainable.



Laboratory Setup (1)



Laboratory Setup (2)



Laboratory Setup (3)



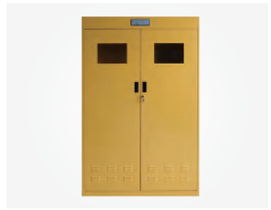
Central Bench



Side Bench



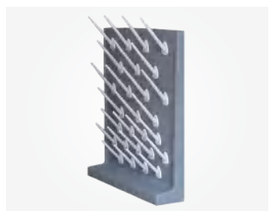
Corner Bench



Gas Cylinder Cabinet



Pharmaceutical Cabinet



Drip Drying Board



Fume Hood（1）



Fume Hood（2）



Reagent Rack

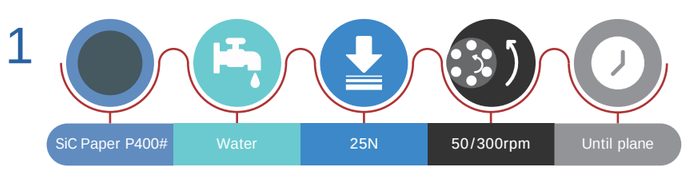


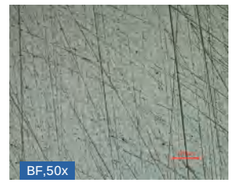
Laboratory Faucet

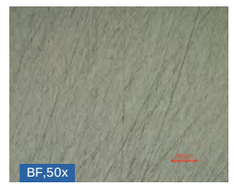


Mobile Fume Extractor

Titanium alloy —— Preparation Procedure





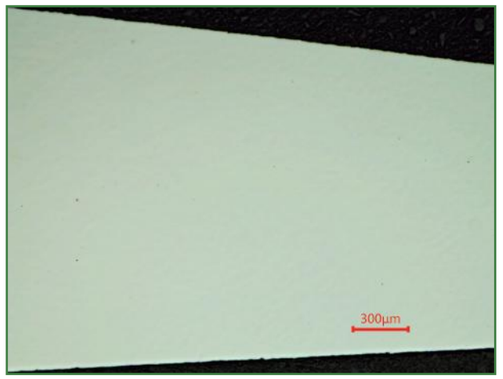




Etch with Keller's reagent for 10–30 seconds.



Polished Specimen – Acceptable Result



Specimen polished with ZN-ZP cloth and 50 nm colloidal silica suspension– 50X

- The specimen surface is clean and free of scratches.

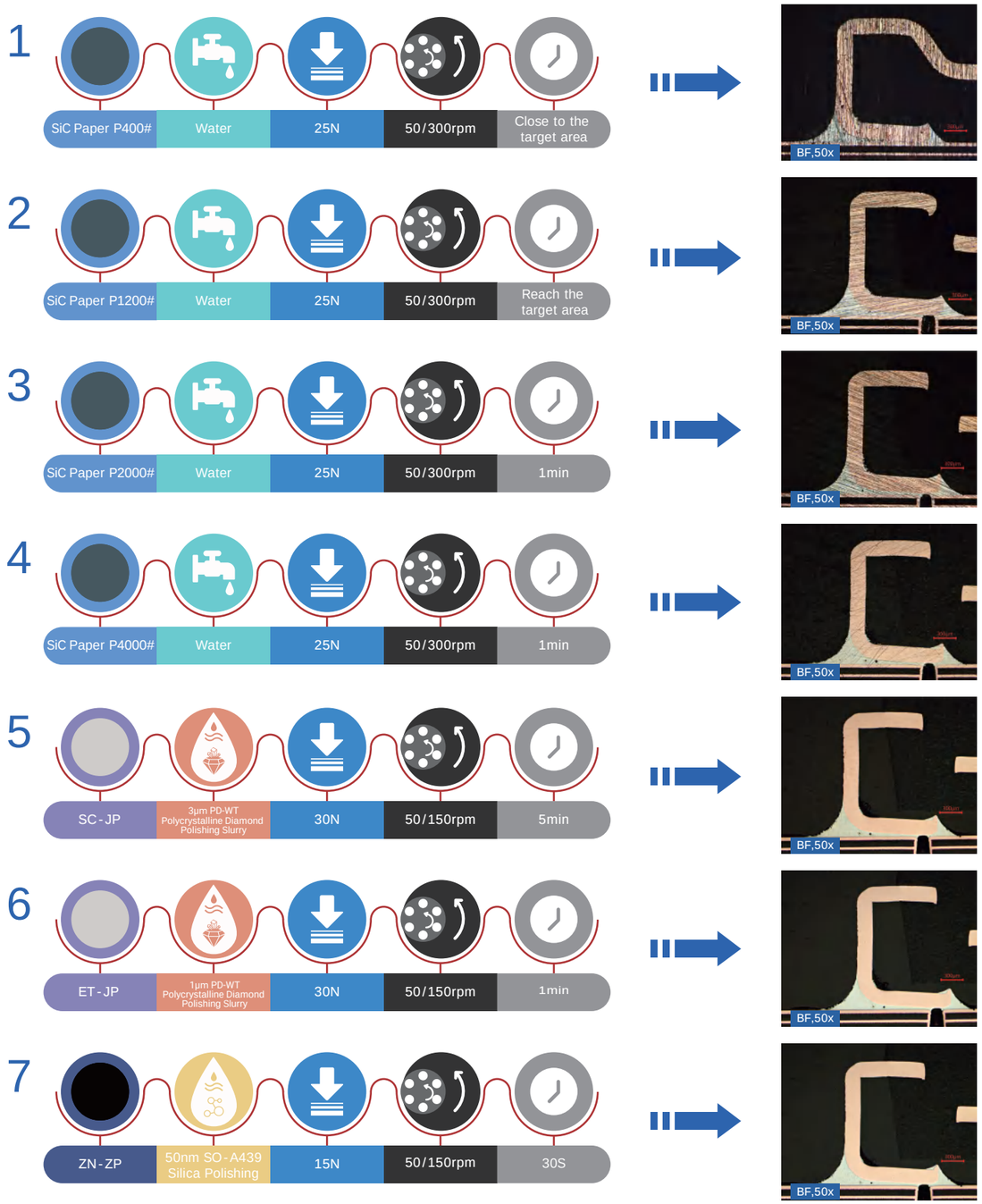
Polished Specimen – Unacceptable Result



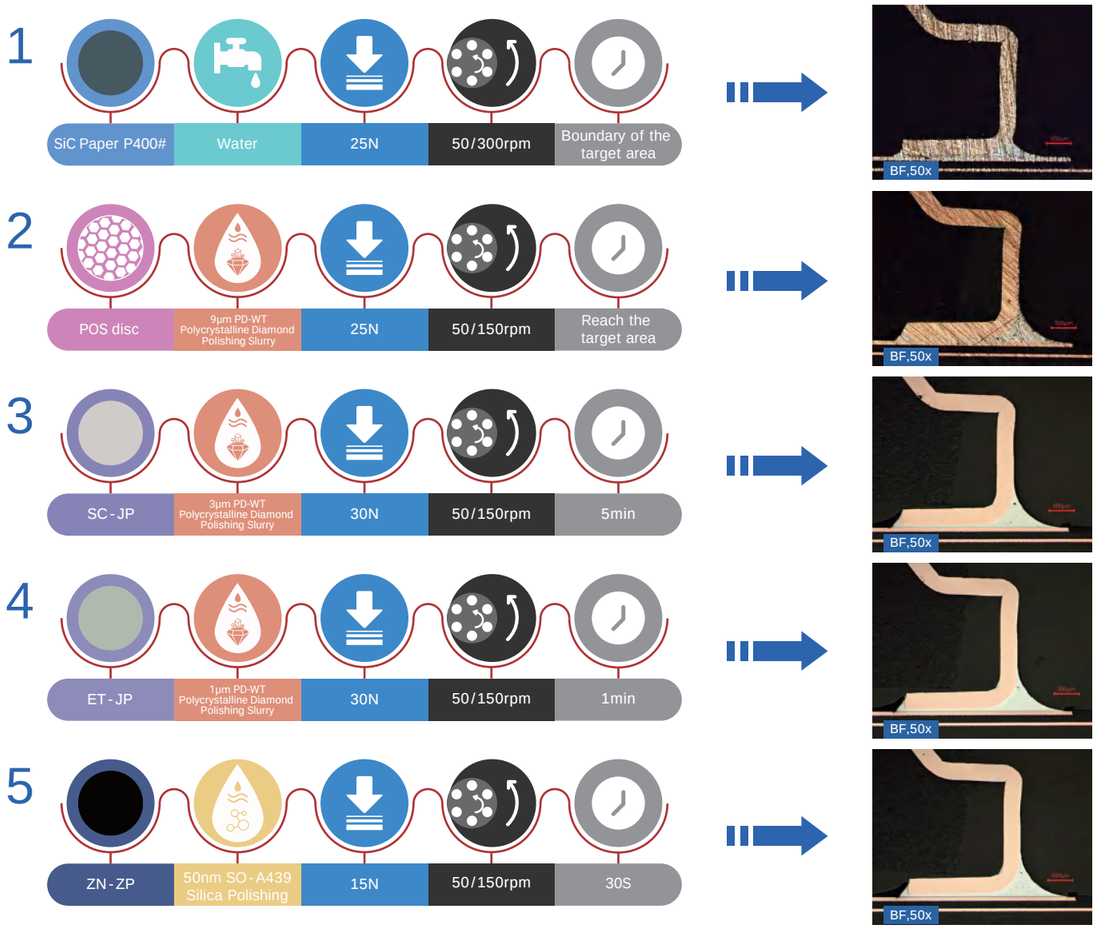
Specimen polished with ZN-ZP cloth and 50nm colloidal silica suspension– 50X

- Residual grinding scratches from POS disc;
- Solution: Extend polishing time with ZN cloth and T401 colloidal silica to improve chemical polishing effect.

Printed Circuit Board (PCB)—— Standard Preparation Procedure



Printed Circuit Board (PCB) —— Quick Preparation Procedure (POS disc)



*Use the pressure for a ϕ30mm sample as the standard pressure, adjusting the pressure based on the size of the sample.

Photo after polishing with ZN-ZP polishing cloth.-50X



Photo after polishing with ZN-ZP polishing cloth-200X

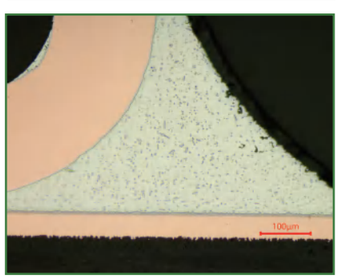
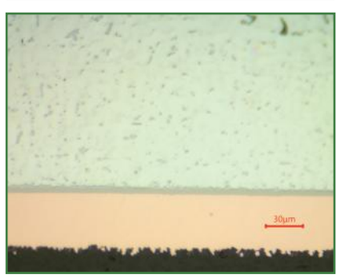
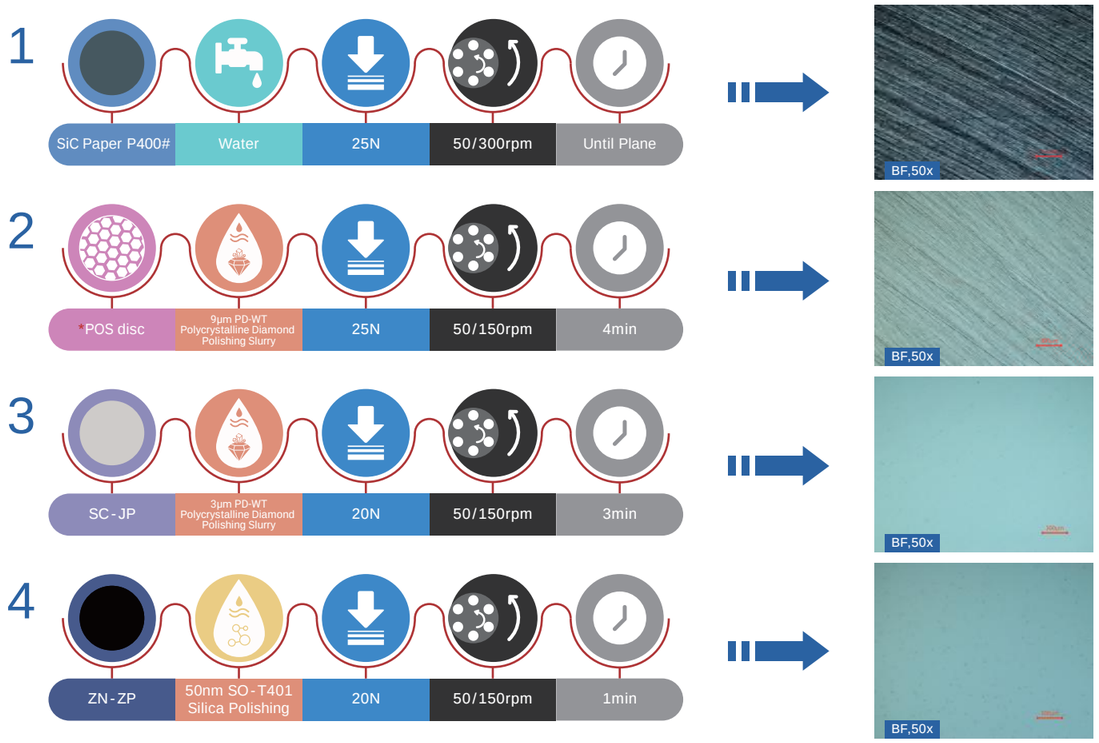


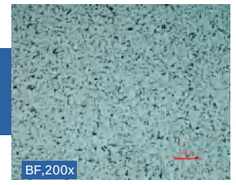
Photo after polishing with ZN-ZP polishing cloth-500X



Hardness ≤HV350 Steel —— Preparation Procedure



*POS plate can also be substituted with P800 or P2000 metallographic sandpaper. Etch with 4% nitric acid ethanol solution for 5-10 seconds.



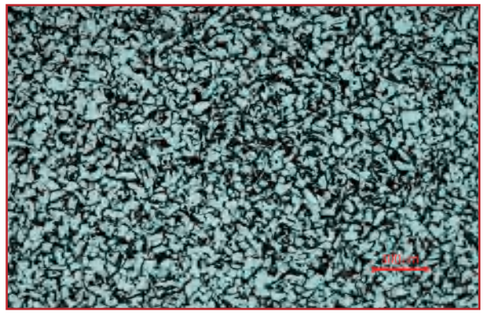
Photos of qualified polished samples



Micrograph of sample etched with 4% nitric acid in ethanol-200X

- Clean, scratch-free surface with welldefined microstructure.

Photos of unqualified polished samples



Micrograph of sample etched with 4% nitric acid in ethanol-200X

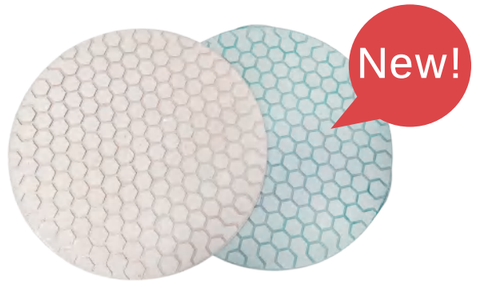
- Etching time was excessive;
- Solution: Regrind using the POS disc, followed by sequential polishing with SC and ZN polishing cloths. Reduce the etching time accordingly.

New Products

High-Quality and High-Efficiency Alternative for Metallographic Precision Grinding

POS/POH Fine Grinding Disc offer an efficient alternative for metallographic precision grinding. With just one step, they replace multiple grinding stages, such as P320 to P2000 abrasive papers. After initial grinding with diamond grinding discs or coarse abrasive paper, the POS/POH discs, combined with 3μm to 15μm diamond polishing suspension, achieve a perfect surface finish in a single polishing step, skipping several intermediate processes.Compared to traditional abrasive papers, POS and POH grinding discs offer higher and more stable material removal rates, longer lifespan, and require less frequent replacement. This significantly reduces sample preparation time, making them the ideal choice for high-volume production and samples with high repeatability.

POH: Suitable for materials with a hardness greater than 150HV.
POS: Suitable for materials with a hardness range of 40-1500HV.



- Higher grinding efficiency, avoiding time wasted on frequently changing sandpaper;
- Lower elasticity, resulting in higher flatness;
- High-quality and highly reliable experimental reproducibility;
- Reduce grinding steps and save grinding time.

HRC60 Alloy Structural Steel



P320 abrasive paper for 1min



POS disc with 9μm Diamond Polishing Suspension for 3 minutes



SC-JP Polishing Cloth with PD-WT 3μm Polycrystalline Diamond Polishing Suspension for 3 minutes

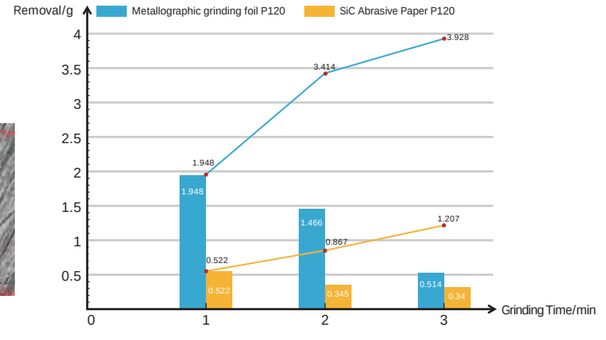
MET-F Metallographic Grinding Film

The MET-F metallographic grinding film features a specially blended abrasive for superior grinding performance. Compared to conventional silicon abrasive papers, it excels in grinding precision, durability, and operational stability, surpassing industry standards and providing an exceptional user experience.

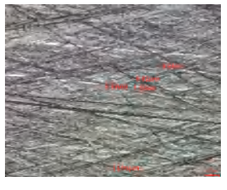


- Exceptional grinding speed, significantly enhances work efficiency;
- Significantly extended lifetime — over three times longer than conventional SiC papers;
- PET-based backing, combining high strength with low elasticity;
- Excellent flatness and resistance to cracking during grinding.

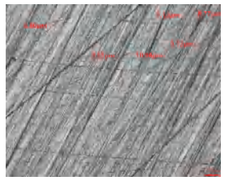
P120 Efficiency and Durability Comparison Chart



Comparison:



Metallographic grinding foil P120



SiC Abrasive Paper P120