

Since 2005

Product Catalog 2022~2023

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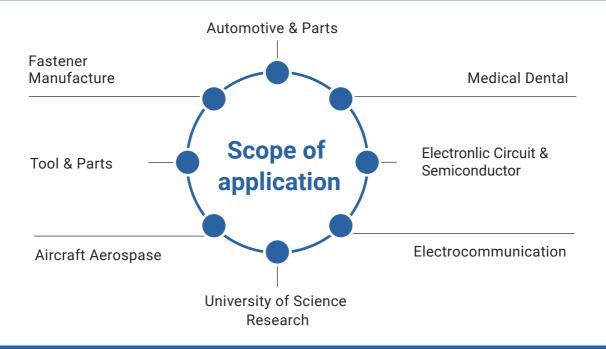
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#### **COMPANY PROFILE**

ROAN

TROJAN(Suzhou) Material Technology Co., Ltd is a professional manufacturer and solutions provider in metallographic analysis field. We have been focusing on the research and development, production and sales of metallographic equipments and consumables for over 17 years and we have independently developed a series of metallographic equipment and material.

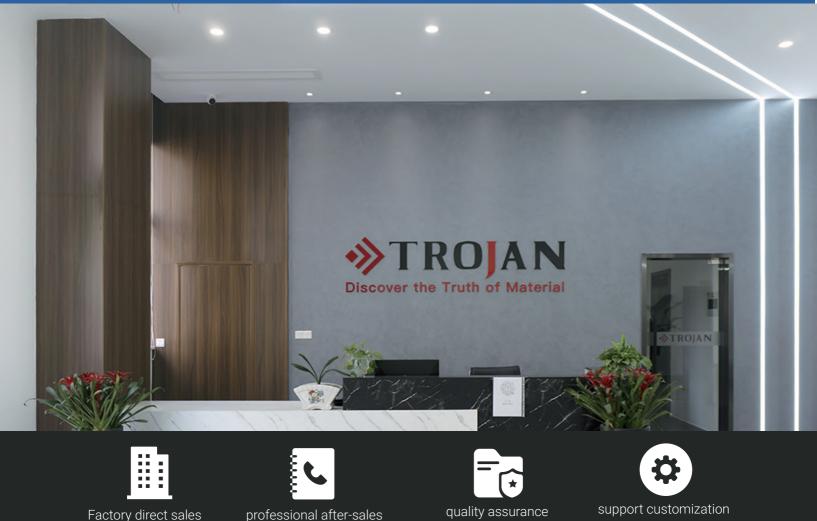
TROJAN and its employees have many years of rich experience in metallography and materials science as well as in microstructure analysis of materials and we have done extensive pioneering works and accumulated rich professional knowledge in this area.



Provide Comprehensive Metallographic Analysis Solutions

# THE HISTORY OF TROJAN

- **2005**/ TROJAN (Suzhou) MaterialTechnology Co.,Ltd. was estalished in Suzhou.
- 2006/ TROJAN established a metallographic consumables production base in Suzhou Singapore Industrial Park to produce a full range of metallographic consumables under the trojan brand.
- 2011/ TROJAN established marketing and customer service centers in Chengdu, Tianjin and Shenzhen to provide services and technical support for customers in Southwest, North and South China.
- 2015/ TROJAN Hong kong Holdings Co., Ltd. was established and began to go to the international market, exporting to Europe, the United States and Southeast Asia, and its quality has been widely recognized by foreign customers.
- 2016/ TROJAN established a metallographic equipment company, responsible for the research and development, production, sales and technical maintenance services of metallographic cutting, mounting, grinding and polishing equipment.
- 2018/ TROJAN launched Alpha and Beta series of highend metallographic inspection equipment to better serve our customers.
- 2019/ TROJAN established an optical polishing division and launched the OPT series of polishing equipment to provide 4500m<sup>2</sup> polishing products and technical support for optical fiber, epitaxial wafer, chip and other industies.
- **2020**/ TROJAN Suzhou's new plant is put into use, and a new series of products are being developed.



Factory direct sales

Trojan(Suzhou) Material Technology Co., Ltd



#### **Customer Service**

Trojan provides you with perfect consultation, installation training and thoughtful after-sales service! Your complete satisfaction is our goal.



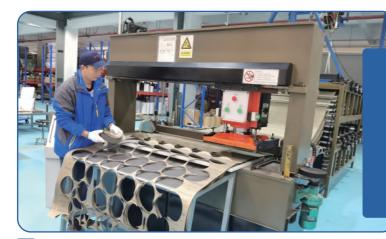
#### Engineering

Trojan has an experienced and professional mechanical and electrical design team to ensure the high performance and reliability of product quality, and can provide professional customized solutions according to the needs of customers.



#### Machine Manufacturing

Trojan Suzhou factory has an assembly workshop of 1500 square meters. All products have been strictly tested before leaving the factory. All the machine has obtained EU CE certification.



#### **Consumables Manufacturing**

Trojan provides you with a full range of metallographic consumables. All consumables are tested and certified by third-party institutions such as SGS.



#### **Applications Laboratory**

Trojan application engineers provide you with free technical consultation, product training and sample testing. TROJAN is not only a manufacturer and supplier of metallographic products, but also a service provider of complete metallographic application technology and solutions.



#### Warehouse

Trojan warehouse has a large inventory of finished products, and regular products can be shipped within 1-2 days. And provide you with special customized products in the shortest time.



#### Shipping

Trojan provides you with the safest, economical and reliable transportation mode according to customer needs.



#### Environment

50KW solar power station Environmental protection is indispensable in business activities. Trojan has always adhered to the green energy policy.

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# SECTIONING

Cutting is the first step of material analysis. The selection of cutting machine and cutting wheel must comply with the geometric size and material characteristics of the sample. The perfect metallographic cutting should avoid microstructure thermal damage and deformation, and preserve the necessary accuracy and efficiency.

Hardness and ductility are the two main parameters for selecting the cutting wheel. The best choice of the cutting wheel depends on the size, hardness and ductility of the material and the equipment used. Trojan's cutting products speak with facts and the cutting process is simple, fast and accurate.

Sectioning



#### TableCUT 200 Automatic Saw

**TableCUT 200** is suitable for cutting samples of various metal materials, printed circuit board, semiconductor, crystal, ceramic, quartz glass and petrography samples.









- 5 inch touch screen, automatic program control, handy, intuitive and convenient;
- Manual or automatic cutting model;
- Fully closed cutting process, safe and reliable;
- the cutting speed is 0.05-5mm/s;
- With line laser, intuitive prediction of sample cutting route;
- A variety of saw blades are available, which can adapt to the cutting of different materials;
- Overheat and overcurrent protection;
- Large range of different clamping tools and systems available;
- Three cutting modes are optional, with built-in overload protection to ensure perfect cutting results.

# 0

Model		TableCUT 200	
	Speed	100~3000rpm	
Wheel	Diameter	Ф200mm	
	Arbor	Ф22mm	
	Voltage/Frequency	110V/60Hz, or 220V/50Hz	
	Rated Power	1.5kw	
Electrical	Touch Screen	5 inch	
	Y-Axis	Manual movement via joystick or automatic feed	
X-Axis		Optional X direction -feed fixture	
Cutting Capacity	Diameter	Φ50mm	
outting capacity	Square	50*126mm	
Table	Dimension(W*D)	465*270mm	
Table	Travel	240mm	
Water Tank	Capacity	5L	
Demensions	W*D*H	570*714*407mm(Hood open:570*714*900mm)	
Weight		63kg	

#### CT-2300 Manual Saw

**CT-2300** is suitable for cutting of various metal materials, circuit boards, semiconductors, crystals, ceramics, quartz glass and petrographic samples. It is equipped with a variety of clamps to cut irregularly shaped workpieces. It is an ideal cutting machine for companies and research institutes.







#### • Features

- Highly reproducible, easy to use;
- Dry or wet cutting;
- T-slot clamping vises for mounting versatility;
- Digital feedback speed control,200-3000rpm;
- Optional angle cutting holder;
- Hard anodized working table.



	CT-2300
Cutting Capacity	30mm
Blade Size	Ф180mm
Arbor Size	12.7mm
Speed	200~3000rpm
Travel	100mm
Drive Power	900w
Dimensions (W*D*H)	460*500*350mm
Weight	45kg
Voltage	110V/60Hz. 220V/50Hz.

#### CT-250S/CT-250V Cutter

**CT-250S/CT-250V** is a desktop metallographic cutting machine designed and manufactured according to the principle of safety and environmental protection. It is suitable for cutting samples of various metallic and non-metallic materials in order to observe the metallographic and petrographic structure of materials.

The machine has the advantages of stable operation, low noise, simple operation and safe use. It is one of the necessary equipment for making solid material samples in the laboratory.









- Push buttun cintrols for start and stop Emergency stop;
- Large viewing window with high brightness lighting system;
- Coolant automatically activates when cutter started;
- Clean-out gun for clearning;
- Easy to operate, reliable, low noise;
- 24V Isolated Electronics, Hood Lock and Electrical Brake.



CT-250S(2800rpm)



CT-250V(1000-3500rpm)

	CT-250S	CT-250V	
Wheel Diameter	Φ250	)mm	
Cutting Capacity	Ф76	mm	
Operation	Manual ch	op cutting	
Table Dimensions	210*230mm		
Motor Power	2.2kw		
Voltage	220,380,440,480V,50/60Hz(3 phase)		
Wheel Speed	2800rpm(60Hz)	1000-3500rpm	
Weight	100kg	105kg	
Size W*D*H	710*740*610mm(Close) 710*890*790mm(Open)		
Cooling unit	60	DL	

The preparation of metallographic samples begins with high-quality cutting process. Perfect surface cutting can reduce the subsequent grinding and polishing processes and shorten the time of sample preparation.

**Beta 300 Pro** cutting machine integrates various cutting methods and technologies. Even heavy-duty large section cutting can obtain excellent cutting surface. The automatic cutting mode can obtain the highest level of repeatability.



## • Features

- Programmable with HMI touch screen controls and pre-set 20 optimized cutting parameters;
- X-Y-Z axes cutting capability and joystick position control;
- Multiple cutting modes to meet the variety of requirements for different samples;
- Intelligent feed rate adjustment according to a preset cutting force;
- Push up sliding door design, with spacious cutting chamber, easy to clamp and handling;
- Robust and reliable with low noise and emission levels.



#### **Cutting Accessories:**





Flat Push Fixture



Cutting Machine Fixture





Heterosexual Fixture

Vertical Fixture

Large Vertical Fixture

www.trojanworld.com



Items		Beta 300 Pro	
	Emergency-Stop	Cutting axis and feed quick stop	
Safety	Door-Open		
Salety	Current Overload	Automatic adjustment	
	Joystick	Two hand control	
Wh	eel Diameter	Ф300mm	
/	Arbor Size	Ф32mm	
Cut	ting Capacity	110mm	
Cuttin	g Capacity. H*D	80*200mm	
Z-Axis Tra	avel (Up and down)	150mm	
Y-Axis Trav	vel (Front and back)	200mm	
X-Axis Tra	avel (Right and left)	80mm	
Tab	le Dimension	280*536mm	
T-Slot Dimension		12mm	
Cu	Itting Power	4kw	
	Voltage	AC 380V, 440/480V, 50/60 Hz, (3Ph+1N+1PE)	
W	/heel Speed	800-3500rpm	
Co	ontrol Panel	7 inch Touch Screen	
	Smart Cutting	Auto	
	Chop Cutting, Z-Axis	Auto	
Cutting Method	Table Feed Cutting, Y-Axis	Auto	
	Pulse Cutting	Chop cutting and Table-feed	
	Step Cutting	Yes	
Cutt	ing Feed Rate	0.1~5.0mm/s	
Las	er Alignment	Yes	
	Weight	367kg	
Dimensions	s W*D*H (Hood open)	940*920*1450 mm(1860)	
Сс	poling unit,lt	80	

# Beta 400MA Manual-Automatic Cutter

**Beta 400MA** is a large manual/automatic cutting machine, which is suitable for cutting all kinds of metal materials, ceramics, quartz glass, and Petrographic samples.

The equipment is equipped with a variety of fixtures, which can cut irregularly shaped workpieces, and realize the automatic/manual feed cutting (Y-direction) of the worktable and the automatic chopping cutting (Z-direction) of the cutting wheel. The automatic cutting mode greatly avoids the burning damage from the sample.









## Features

- Cast aluminum base, 304 stainless steel cover, strong overall rigidity, more durable and corrosion-resistant;
- Using handwheel to control cutting, more labor-saving;
- Large worktable and operating space;
- Cutting blade speed 2000 rpm;
- A variety of saw blades can be selected to adapt to the cutting of different materials;
- Push and pull the sliding door up and down to save space;
- Floor independent water tank, large volume, easy to remove and clean.



# Technical Specifications

	ltems	Beta 400MA	
Wheel Diameter		Ф400-Ф450mm	
	Arbor Size	32mm	
Cutting	у Capacity. Ф400	Ф130mm	
Cutting	g Capacity.Ф450	Ф150mm	
Cutting ca	араcity,H*D (Ф400)	130*400mm	
Cutting ca	apacity,H*D (Ф450)	150*300mm	
Z-Axis Travel (\	/ertical Movement),Φ400	220mm	
Z-Ax	cis Travel,Φ450	190mm	
Y-Axis Travel	(Horizontal Movement)	270	
X-Axis Travel (Cross Feed)		220	
Table D	Table Dimensions (W*D)       438*488mm		
T-SI	lot Dimension	12mm	
Cu	utting Power	7.5kw	
W	/heel Speed	2000rpm	
C	ontrol Panel	7``touch screen	
	Smart Cutting	Yes	
	Chop Cutting, Z-Axis	Auto	
Cutting Method	Table Feed Cutting, Y-Axis	Manual/Auto	
	Pulse Cutting	Z-and Y-Axis	
	Auto-Feed Cutting	Z-and Y-Axis	
	Weight	550kg (machine) + 40 kg(water tank)	
Recirc	culation Coolant	100L	

# **Cutting Consumables:**









Cut Off Wheels

Diamond Wafering Blades

**CBN** Wafering Blades

Cutting Coolant

# **Cut Off Wheels**

Cutting is the first step in a complete material analysis,the selection of cutting machine and blades must match geometry and material properties of sample. TROJAN cutting products make the cutting process simple, fast and accurate.

TROJAN cutting blades and consumables have a unique formula and process, it can be fully cooled and reduce thermal damage.TROJAN Cut off wheel adopts unique manufacturing technology. It can be fully cooling up and reduce thermal damage of the samples. Furthermore, the surface of the product can also eliminate the accumulation of debris during the cutting process and the convenient cleaning method can keep the worktable and the cutting chamber also clean.



# A60 Cut Off Wheels (Extremely Hard)

**Description:** Aluminum Oxide Material,Resin Bond. **Application:** For cutting extremely 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 Cut Off Wheels (Medium Hard)

**Description:** Aluminum Oxide Material,Resin Bond. **Application:** For cutting medium hard ferrous metals(HRC40-55).

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 Cut Off Wheels (Soft)

**Description:** Aluminum Oxide Material,Resin Bond. **Application:** For cutting soft ferrous metals(HRC20-40).

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 Cut Off Wheels (Soft Non-Ferrous)

**Description:** Silicon Carbide Material,Resin Bond. **Application:** For cutting soft Non-Ferrous,AI,Cu Alloys.

Order No:	Code	Spec.(mm)	Package
01.02.413	S201505	150*25.4*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*50.8*4.0	10pcs

# **Diamond/CBN Wafering Blades**

Wafering blades have very thin cut width, are recommended for precision cutting/sectioning or when cut width loss needs to be minimized. There are plating, resin and metal bond 3 types configurations with Diamond or CBN.



(Diamond Plating)

(Diamond Resin)

(Diamond Metal)

# **DP Diamond Plating Wafering Blade**

Material: A metal core with diamonds nickel plated to the rim.

Application: For cutting PCB, plastic, fiber composites resin or 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	1рс
01.03.530	DP151305	150*12.7*0.5	1pc
01.03.541	DP181308	180*12.7*0.8	1рс
01.03.551	DP202210	200*22.0*1.0	1pc
01.03.560	DP253215	250*32.0*1.5	1рс
01.03.570	DP303220	300*32.0*2.0	1pc

# DR Diamond Resin Bond Wafering Blade

Application: For cutting hard, brittle or delicate materials including ceramics, composites, carbides and exotic 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
01.04.640	DR181608	180*16.0*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 Diamond Metal Bond Wafering Blade

Application: For very hard or brittle materials, glass ceramics, stone.

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 Series

**CBN-R Series** 

# **CBN-R CBN Resin Bond Wafering Blades**

Application: For hard steel above HRC 60; Mostly used at higher speeds.

Order No:	Code	Spec.(mm)	Package
01.06.920	CBN-R101304	100*12.7*0.4	1pc
01.06.925	CBN-R131304	125*12.7*0.4	1pc
01.06.930	CBN-R151305	150*12.7*0.5	1pc
01.06.941	CBN-R181210	180*12.7*1.0	1pc
01.06.950	CBN-R202210	200*22.0*1.0	1pc
01.06.960	CBN-R253215	250*32.0*1.5	1рс
01.06.970	CBN-R303220	300*32.0*2.0	1pc

# CBN-M CBN Metal Bond Wafering Blades

**Application:** Used for hard steel, iron, cobalt nickel and lead based alloys, most commonly used at lower speeds.

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

In order to get better cutting effect and reduce burns of samples, metallographic cutting coolant is usually added in the cutting process of metallographic test. The product solution is clear and transparent, without any minerals and nitrite, and has the dual effect of cooling and lubrication.

#### TJ 1220 Cutting Coolant

How to use: Mix with 20-30 times water when using;

Application: Protect the sample overheating, good rust prevention,

Order No:	Description	Package
01.07.810	TJ 1220 Cutting Coolant	1L
01.07.820	TJ 1220 Cutting Coolant	5L

#### TJ 1410 Cutting Coolant

How to use: Mix with 20-30 times water when using; Application: Protect the sample overheating, good lubrication.

Order No:	Description	Package
01.07.857	TJ 1410 Cutting Coolant	1L
01.07.860	TJ 1410 Cutting Coolant	5L







Cut Off Wheels



Diamond Wafering Blades



# MOUNTING

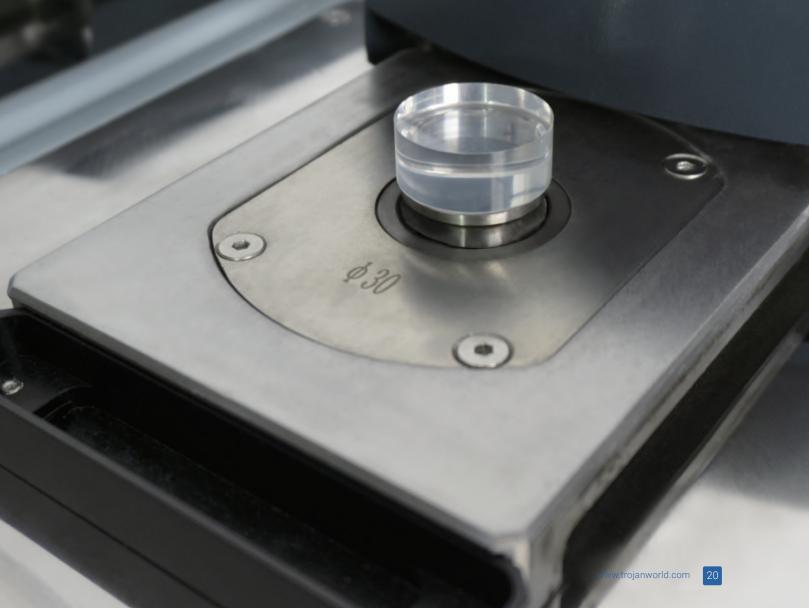
## Hot Mounting

Hot mounting is ideal solution to get high quality, uniform size sample, as well as short process time. It is to use mounting compounds with certain pressure, temperature to make a sample.

#### Cold Mounting

TROJAN cold mounting resin system avoides sample from high temperature and pressure, making sample preparation results stable and reliable, efficient.

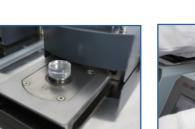






#### FLEXPRESS-600 Mounting Press

**FlexPRESS-600** is a flexible mounting press, with modular mounting unit design, and is combined with one base unit and 1 - 5 mounting units. Meet the different customer's specific needs.





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- Modular design of mounting unit to meet customer's specific needs;
- Sliding closure with automatic open/close;
- 7-inch touch screen with max. 20 commonly procedures;
- Pre-heating and per-press furcction to meet the specific mounting reguirement of different material;
- Real-time display the temperature and pressure curve during curing;
- Individual control of heating/pressing/cooling for every unit.

	FlexPRESS-600M Base unit	FlexPRESS-600S Mounting unit
Voltage	110/220V	
Heating Power	1.6	ikw
Mold Size	Φ30mm(standard),Φ25.4mm,Φ32	mm,Ф40mm,Ф50mm(Customized)
Heating Range	60~2	250°C
Holding Time	1~60min	
Max,pressure	570 Bar (Depending on mold size)	
Pressure Mode	Hydraulic	
Control Panel	7-inch touch screen	Push buttons
Cooling Mode	Auto:by temperature or time	
Cooling rate	Manual/High/Middle/Low	
Depth*With*Height	561*300*492mm 550*254*492mm	
Weight	60kg	52kg

#### MT-1H Mounting Press

**MT-1H** is an automatic hot mounting press machine, which is suitable for curing different material, such as epoxy resin, phenolic powder, acrylic powder, etc.







# Features

- 7-inch HMI,Friendly and simple user interface desigh;
- Automatic water cooling, with three modes of cooling rate;
- Sliding closure design for easy opening and closing mould assembly easy to change;
- Fully hydraulic pressure.



	MT-1H
Voltage	110V/220V
Heating Power	1.6Kw
Mold Size	Φ30mm(standard),Φ25.4mm,Φ32mm,Φ40mm,Φ50mm(Customized)
Heating Range	room temperature~200°C
Holding Time	1~60min
Max.Pressure	0~300Bar (Depending on mold size)
Cooling Mode	Automatic by time/manual
Cooling Rate	High, Medium and LOW
Control Panel	7-inch touch screen
Dimension (W*D*H)	470*432*535mm
Weight	48kg

## ThetaVAC-2 Vacuum Cold Mounting Machine

Trojan's new LCD touch screen programmable vacuum system for epoxy cold mounting, offers excellent pore impregnation in a compact format. This equipment can make epoxy resin penetrate into any porous samples quickly and effectively, resulting in ensured the edge protection of the sample. This equipment is light and compact, external connecting the compressed air source can quickly and effectively pulls a vacuum, and can also be connected to vacuum air pump.







#### Features

- Ability to set vacuum level, time, number of cycles under vacuum;
- Large Chamber, also provide sample tray for larger samples;
- Easily place samples when pouring under vacuum with electric turn table;
- Teflon coated. for the chamber and the sample tray, Even if the epoxy resin sticks to the inner wall, it is very easy to clean.



		ThetaVAC-2
Electrical	Power Supply	100~240V
	Vacuum Level	0 ~ -80kPa, vacuum pump 0 ~ -90kpa
Vacuum	Maximum Vacuum Flow	75L/min
	Air Consumption	28-42L/min
	Noise	55-60dBA
Chamber	Diameter	Φ250mm(Φ40mm*12)
	Height	80/100
Supply Air	Pressure	Required 0.6~0.7MPa
Vacuum	Voltage	Same with the power input
Pump (Optional)	Power	Max:1000W
Dimensions	W*D*H	497*461*293mm(Cover open:497*461*655)
Weight		18kg

#### UVmount Mounting Device

The **UVmount** curing device has a very short process time. It opens up the possibility of producing transparent, materialographic standard mountings of various materials very quickly and cost-effectively.

The UVmount curing technology is an energy-saving, clean and environment-friendly technology. It does not contain solvents, has a protective effect on the ecological environment, and will not emit toxic gas and carbon dioxide to the atmosphere. Therefore, it is known as "green technology".

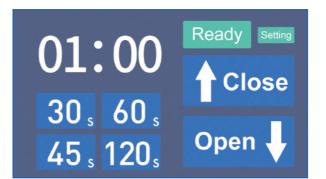
The UVmount curing technology is a light processing technology that polymerizes liquid epoxy acrylic resin into the solid-state at high speed through UV irradiation with a certain wavelength.



#### Features

- Automatic open/close the curing chamber;
- 4.3 inch touch screen, with 4 pre-set timer buttons;
- Easy operation;
- Low polymerization temperature.







		UVmount Mounting Device
Sample support table	Dimension	260*200mm
Max.Sample	Hight	50mm
Adjustabre	Curing time	0~100min
Dimensions	W*D*H	400*400*185mm
Wavelength	Туре	UV light (365nm)
Electrical	Voltage/Frequency	85~240V,50/60Hz
Weight		15kg

# ThetaMount Pressure Chamber

**ThetaMount** is suitable for the sample preparation of metallographic cold mounting, especially for epoxy or acrylic cold mounting.

Without bubbles and pores samples can be made by putting them into the chamber and curing under pressure, physical and chemical properties of the resin will not change.





#### Features

- No electricity, pressurized by a pneumatic system;
- With water-separator and fast-insert connectors;
- Quick lock and release cover design;
- High performance in sealing, and overflow valve in safety;
- More spacious mounting chamber, and stainless steel container;
- Equipped with a timer to remind curing time.



	ThetaMount
Operating Pressure	2.0bar
Safety Valve Overflow Pressure	2.8~3.3bar
Chamber Diameter	Ф235*170mm
Dimension W*D*H	340*400*270mm(Closed) 340*400*370mm(Open)
Weight	8.5kg



Prducts	PT 2231	BB 2232	TM 2235	TM 2261	EP 2237	DC 2239	MA 2275
Description	Phenoloc Resin	Glass fiber filled Phenolic	Transparent	Transparent	Glass fiber filled Epoxy	Conductive	Mineral filled melamine resin
Components	black/red/ green grit	black grit	white powder	white powder	black grit	Black-Brown Grit with powder	light yellow to white powder
Heat time	4-6min	4-6min	6-8min	6-8min	5-7min	4-6min	4-7min
Cooling time	2-3min	2-3min	7-10min	7-10min	4-6min	4-6min	5-8min
Cooling speed	High/Medium	High/Medium	Low	Low	Medium	High	Medium
Pressure	100-300bar	100-150bar	100-150bar	100-150bar	100-300bar	100-300bar	100-300bar
Heat temperature	150-180°C	140-180°C	160-180°C	160-180°C	150-180°C	150-180°C	150-180°C
Hardness (Shore D)	85-90	90-93	85-87	85-87	90-93	90-92	88-90

\*The above parameters is base on \$430mm mold.

#### PT 2231



Features: Low price, black,green and red phenolic grit. Application: For routine applications suit for most products.

BB 2232

0

Features: Extreme hardness, very good grinding and polishing properties, does not stick on embedding instruments,non adherent.

Application: All hard materials, e.g. hardened gears, hard metals and ceramics.

Order No:	Package
02.01.210	1kg
02.01.220	4kg
02.01.225	20kg

#### Order No: Package Black Green Red 02.01.310 02.01.311 02.01.312 1kg 02.01.320 02.01.321 02.01.322 4kg 02.01.325 02.01.326 02.01.327 20kg

#### TM 2235



**Features:** Very thin melts rapidly. **Application:** Complete embedding solution for thin layers, top layer for specimen labeling.

#### TM 2261



Features: Transparent and very clear. allows easy sample observation.

Application: Same as TM 2235 and can be dissolved by Trojan special solvent.

Order No:	Package	Order No:	Package
02.01.110	1kg	02.01.140	1kg
02.01.120	4kg	02.01.144	4kg
02.01.125	20kg	02.01.145	20kg

#### EP 2237

Features: Thin, extreme hardness, optimal edge connection, good adhesion to the specimen surface, very good grinding and polishing properties.

**Application:** All hard materials, e.g. hard gears, metals and ceramics.

#### DC 2239



Features: Excellent conductive, voltage loss almost eliminated completely. Application: SEM analysis.

nara ge			
Order No:	Package	Order No:	Package
02.01.710	1kg	02.01.910	1kg
02.01.720	4kg	02.01.940	4kg
02.01.751	20kg	02.01.945	20kg



#### MA 2275

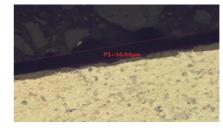
**Features:** High hardness, optimum edge connection, good adhesion to the sample surface, very good grinding and polishing properties, suitable for black surface specimen.

Application: Medium hard materials like normal hard metals, steel in general, aluminum, copper materials, etc.

Order No:	Package
02.01.960	1kg
02.01.965	4kg
02.01.970	20kg



Good edge connection



Gap





Quatara	Acrylic System		Epoxy System							
System	Used for rapid cure times,or need large volume sample preparation.		Used for excellent flow and penetration,or when better adhesion chemical resistance,less shrinkage and clarity are required.							
Products	TJ 2210	TJ 2800	TJ 2220	TJ 2568	TJ 2221	TJ 2226	TJ 2562			
Part A	Powder	Powder	Liquid	Liquid	Liquid	Liquid	Liquid			
Part B	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid			
A:B (w/w)	10:8	10:5	2:1	4.5:1	2:1	4.5:1	3:1			
Pot life	2-4min	2-4min	4-8min	5-10min	5-10min	10-20min	30-60min			
Cure time 25°C	8-12min	8-10min	30-60min	45-90min	1-2hour	4-6hour	10-12hour			
Peak temperature	80°C	85°C	144°C	125°C	112°C	90°C	<32°C			
Hardness (Shore D)	80	82-83	82	82	78	82	80			
Edge protection	Good	Better	Better	Excellent	Good	Excellent	Better			

\*The above parameters is in 30mm mold.25°C

\*The Trojan Dissolver is a blend of solvents that when heated removes cured resin from a specimen.

# Acrylic Curing System is typically used for rapid cure times, or When large volume sample throughput is needed.



#### TJ 2210 Acrylic Resin

**Features:** High transparent, good flow and penetration. especially for PCB and other electronic components.

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



#### TJ 2800 Acrylic Resin

**Features:** Translucent, good edge protection, low shrinkage. Cure with the mounting pressure pot.

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

Epoxy Curing System is typically used for excellent flow and penetration, or when better adhesion, chemical resistance, less shrinkage and clarity are required.



**TJ 2220** Epoxy Fast (2:1) Features: Transparent yellowish fast cure epoxy system, good adhesion.

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



#### **TJ 2568** Epoxy Quick (4.5:1) Features: Clear, fast curing epoxy system, low shrinkage, excellent adhesion.

Order No:DescriptionPackage02.04.857Epoxy Resin, Liquid1kg02.04.858Hardener, Liquid230g



**TJ 2221** Epoxy King (2:1) Features: Clear, general purpose fast cure epoxy system.

#### **TJ 2226** Epoxy Resin (4.5:1)

Features: Clear, transparent, general purpose slow cure epoxy resin.

Order No:	Description	Package	Order No:	Description	Package
02.04.721	Epoxy Resin, Liquid	2kg	02.04.773	Epoxy Resin, Liquid	1kg
02.04.722	Hardener, Liquid	1kg	02.04.774	Epoxy Curingagent,Liquid	230g



#### **TJ 2562** Epoxy Thin (3:1)

Features: Clear, low viscosity and very low peak temperature, good adhesion.

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



# Mounting Accessories

# Sample Support Clip

Series of clips hold thin samples on edge for encapsulation. Use metal for compression mounting, and plastic for cold mounting.

	Order No:	Description	Package
0	07.01.010	Plastic Coil Clip, 6*100mm	100pcs
U	07.01.012	Plastic Coil Clip, 6*100mm	1000pcs
2	07.01.016	Stainless Steel Clip, 7*120mm	100pcs
4	07.01.017	Stainless Steel Clip, 7*120mm	1000pcs
8	07.02.010	T Transparent Plastic Clip, 10*9*13mm	100pcs
4	07.03.010	T White Plastic Clip, 10*9*13mm	100pcs
6	07.04.010	T Black Plastic Clip, 10*9*13mm	100pcs
0	07.04.012	T Black Plastic Clip, 10*9*13mm	500pcs
6	07.05.001	S Black Plastic Clip, 20*10*8mm	100pcs



# 2-Part Mounting Cups

Reusable cup has a separable bottom, which is easy to remove mounting sample after curing.

Order No:	Description	Package
08.02.002	Separate Firm Molds, Φ25*20mm	10pcs
08.02.004	Separate Firm Molds, Φ30*23mm	10pcs
08.02.006	Separate Firm Molds, Φ32*25mm	10pcs
08.02.008	Separate Firm Molds, Φ40*27mm	10pcs



# Silicone Mold Cups

Durable, reusable silicone mold cups are widely used for acrylic and epoxy mounting system.

Order No:	Description	Package
08.02.018	Silicone, Φ20*18mm(depth)	10pcs
08.02.020	Silicone, Φ25*18mm(depth)	10pcs
08.02.022	Silicone, Φ30*18mm(depth)	10pcs
08.02.030-1	Silicone, Φ40*25mm(depth)	10pcs
08.02.050	Silicone, 50*70*20mm(rectangle)	10pcs
08.02.058	Silicone, 180*106*30mm(rectangle)	10pcs



# Teflon Mold Cups

Durable, reusable Teflon mold cups are very easy to remove mounting samples after curing.

Order No:	Description	Package
08.02.110	Teflon, easy release, Φ25mm	1pc
08.02.120	Teflon, easy release, Φ30mm	1pc
08.02.132	Teflon, easy release, Φ40mm	1pc

# **Disposable Mounting Cups**

Economical choice for high volume mounting requirements.

	Order No:	Package	
1	08.01.013 24*20*10mm, Single lattice		500pcs
2	08.01.015	22*11*8mm, Single lattice	500pcs
	08.01.016	22*11*8mm, Single lattice	1000pcs
8	08.01.030	Ф30mm, externally circular and internally square	100pcs
	08.01.032	Φ30mm, externally circular and internally square	200pcs
	08.01.035	Φ30mm, externally circular and internally square	500pcs
4	08.01.038	20*20*12.3 mm, externally square and internally circular	500pcs
6	08.01.039	20*20*12.3 mm, externally square and internally circular	1000pcs

# **Etakit Mounting Splitter**

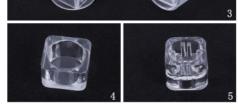
EtaKit Splitter is used to release oval mounting cups, easy, efficient.

Order No:	Description	Package
13.20.003	Apply to 2-part mounting cups	1pc/pkg

	e	
04	80	9









# **GRINDING AND POLISHING**

#### Grinding

The surface of mounting sample is not smooth. Grinding is to remove excess part of the sample with abrasive materials.

#### Polishing

Polishing is to use a small amount of polishing powder or polishing liquid to place on polishing cloth, later the sample is polished.Purpose of polishing is to remove the deformation and scratches during the grinding process, resulting in a scratched mirror surface for microscopic analysis of the microstructure.





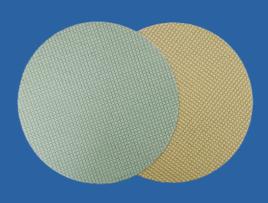








#### DiaRe Diamond Grinding Disk (page 43)



# Alpha Series Manual Grinder and Polisher Machine

Alpha-series is suitable for rough grinding, fine grinding and polishing of metallographic/petrographic specimens. It is widely used in material analysis/theory analysis laboratories of large and small enterprises and scientific research institutions.





Alpha-100



Alpha-202

#### Features

- One-button flushing and cleaning, effective prevent the obstruction causing by grinding debris;
- Faucet can be switched to automatic mode, less operations for manual grinding and polishing;
- Large diameter drain hose, not easy to blocking and drainage quickly;
- Retractable water hose for easy cleaning and remaining;
- Optional glass operation panel, easy to clean and good at sealing;
- Optional buttons operation panel, simple and practical for using.



# **Technical Specifications**

		Alpha-100	Alpha-200	Alpha-202
Working Wheel	Wheel	Single wheel	Double wheel with one panel	Double wheels With Individual Control Panel
	Speed	50-1000rpm		
	Diameter	8"-10"(200/250mm)		
	Direction	Clockwise/Counter clockwise		
Electronic	Voltage/Frequency	110V/60Hz.220V/50Hz		
Electronic	Rated Power	750W	750W	1500W
Operation	Glass Touch Panel	Standard		
Panel	<b>Button Press Panel</b>	Optional		
Dimensions	Depth*With*Height	740*455*340mm 740*820*340mm		
Weight		45kg	65kg	85kg

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#### Alpha 600 Automatic Grinder Polisher

**Alpha-600** is a compact, automatic grinding and polishing system designed for high end grinding and polishing surfaces.Provide central force and individual force for the specimens.

Optional peristaltic pump dosing system support max. 4 kinds of suspensions/lubricants. High repeatability results can be obtained conveniently and quickly.





#### Features

- 5.6-inch programmable HMI with simple and humanize interface;
- Central load and individual load applications;
- Max. 4 peristaltic pumps are available for the dosing system;
- Built-in 20 commonly used procedures
- Large diameter drain hose, not easy to blocking and drainage quickly;
- Retractable water hose for easy cleaning and remaining;
- Built-in smart cooling fan to prevent motor getting hot at low speed.



		Alpha-600
	Force Application	Central and Individual
	Central Force	20-500N
Head	Individual Force	5-100N
	Power	400W
	Speed	20~150rpm
	Direction	Counter clockwise
	Speed	50-750rpm
Grinder	Wheel Diameter	8"-10"-12"(200/250/300mm)
	Direction	CW/CCW
Dosing System	Pump	Peristaltic pump
Dosing System	Pump numbers	1~4
Dimensions	Depth*With*Height	730*660*630mm
Weight		80kg

#### OPT-380 Automatic Grinder and Polisher

**Opt-380** automatic precision grinding and polishing machine has strong comprehensive performance in the metallographic industry, mainly used for grinding and polishing samples of metal, ceramics, glass, PCB, optical materials (such as zinc sulfide, silicon and other crystals), refractory materials, composite materials and other materials. It is one of the ideal grinding and polishing equipment for scientific research and production.







#### Features

- Swing arm can be disassembled quickly, which is convenient to replace the grinding plate;
- Motor driven swinging arm can meet different requirements;
- Stepless speed control mode, and is equipped with a digital display meter to display the number of revolutions in real time;
- Time setting between 0-999h;
- Cooling fan, long-term low-speed operation is not easy to heat;
- 2.4-inch LCD screen control panel, simple interface, easy to operate;
- Cooling water is electrically controlled by solenoid valve, which can realize the automatic control of cooling water;
- Synchronous belt, convenient for maintenance and replacement.

		OPT-380
	Speed	10-200rpm
Working Wheel	Diameter	Φ381mm
	Station	Three station
Grinding Capacity	Specimen Size	Dia < Ø155mm
	Planeness	less-than 0.002mm per 20*20mm
	Voltage/Frequency	220V/50Hz
Fleetrie	Rated Power	800W
Electric	Standby Power	15W
	Regular Time	0-999H 59M 59S
Dimensions	Long*Wide*High	771*653*338mm
Weight		150kg

#### GP-1A/GP-2A **Grinder & Polisher**

GP-1A/GP-2A is a multi-functional single/double disc continuously variable grinding and polishing machine. The speed range of the working disc is 50-1000 rpm. This machine is suitable for the whole sample preparation process of rough grinding, fine grinding, rough polishing and fine polishing.



GP-1A



#### Features 0

- With international advanced design, its appearance, performance, ease of operation;
- Stepless speed control & three fixed speed mode, work disc can be arbitrarily selected;
- Manual or automatic control of clockwise and counter-clockwise rotation;
- Set three speed mode to grind and polish;
- FRP shell, all stainless steel standard parts.

GP-2A



		GP-1A	GP-2A		
	Wheel	Single wheel	Double wheel with one panel		
Working Wheel	Speed	50-1000rpm			
Working Wheel	Diameter	8"-10"(200/250mm)			
	Direction	Clockwise/Counter clockwise			
Electronic	Voltage/Frequency	110V/60Hz.220V/50Hz			
Electronic	Rated Power	750W			
Operation Panel	Keyboards Press Panel	Stan	dard		
Dimensions	Depth*With*Height	650*370*310mm	710*760*330		
Weight		34kg	57kg		

#### GP-1000A/GP-2000A Automatic Grinder & Polisher

**GP-1000A/GP-2000A** grinder & polisher is automatic grinding and polishing machine, for single/double disc stepless speed grinding, and polishing multipurpose machine. It achieve the sample from the rough grinding to fine grinding, rough polishing to fine polishing. The unit has a cooling device to cool the sample during grinding process to prevent overheating from destroying the microstructure.





#### Features

- Digital display disc rotation speed;
- Load pressure, sample preparation time adjustable;
- Working disc with three fixed speed and stepless speed function;
- Grinding head can be stepless control speed;
- Quick replacement grinding and polishing,multisample holder;
- Aerodynamic multi-point loading;
- Large volume abrasive automatic dispensing system;
- 6 samples can be processed at the same time.



		GP-1000A	GP-2000A		
	Wheel	Single Wheel	Double Wheel		
	Speed	15~150rpm			
Base	Direction	CW/0	CCW		
	Power	750	W		
	Wheel Diameter	8"-10"(200/250mm)			
	Force Application	Individual			
Head	Speed	50-1000rpm			
	Individual Force	0.1~0.4mpa			
	Power	250W			
Dosing System	Auto-dosing	1bo	ttle		
Volt	age	110V 60Hz, 220V 50HZ			
Minimum Pres	ssure Required	0.4mpa			
Dimensions	Depth*With*Height	650*370*640mm 710*760*640m			
We	ight	65kg	85kg		

#### VP-430 Vibration polishing machine

**VP-430** vibration polishing machine is designed for the preparation of specimen surfaces practically without deformation. This preparation method is especially suited for further characterizations like EBSD (electron backscatter diffraction),SEM Scanning Electron Microscope,nano indentation using AFM (atomic force microscopy) or micro hardness testing. Due to the very gentle removal of material it is applicable especially for soft and ductile materials, like tianium-alumium, pure copper and copper alloys, aluminum allloys, soft steel, and nickel-based alloys.







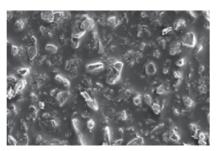
#### Features

- Piez motor,low power consumption,low noise and smooth operation;
- The disc can be locked and release by one key,making the operation more convenient and quick;
- 7-inck touch screen, can save 20 programs;
- It can be adjusted automatially according to the increased sample weight, and the "revolution" speed of the sample can be automatically maintained;
- A pulse mode can be set to avoid solidification of the liquid in the tray.

		VP-430
	Diameter	12"(300mm)
Working Plate	Sample Holder	1inch, 1.25inch, 1.5inch, 2inch (customized according to customer needs)
	Voltage/Frequency	100~240V / 50 / 60 Hz
	Rated Power	50W
Electrical	Time Setting	9999hours
	Speed	1-20rpm
	Vibration Frequency	40~400Hz
Dimensions	L*W*H	516*503*379mm (cover opening: 607*503*669)
Weight		53kg



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.









SEM 50X

Before use 50X

After use 50X

# Commonly Abrasive Grade Comparison Chart

Particle Size(um)	260	200	125	80	68	52	40	35	26	22	15	10	5
USA Grit	#60	#80	#120	#180	#220	#240	#280	#320	#360	#400	#600	#800	#1200
FEPA	P60	P80	P120	P180	P240	P280	P360	P400	P600	P800	P1200	P2400	P4000







**PSA** 

#### Silicon Carbide Disc (Plain Back)

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

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# Silicon Carbide Disc (PSA)

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



Plain Back



PSA

# Alumina Disc ( Plain Back )

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120	03.01.103	03.01.403	03.01.703	50pcs
180	03.01.104	03.01.404	03.01.704	100pcs
320	03.01.105	03.01.405	03.01.705	100pcs
600	03.01.107	03.01.407	03.01.707	100pcs
800	03.01.108	03.01.408	03.01.708	100pcs
1200	03.01.110	03.01.410	03.01.710	100pcs

# Alumina Disc (PSA)

FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
120	03.02.403	03.02.503	03.02.803	50pcs
180	03.02.404	03.02.504	03.02.804	100pcs
320	03.02.405	03.02.505	03.02.805	100pcs
600	03.02.407	03.02.507	03.02.807	100pcs
800	03.02.408	03.02.508	03.02.808	100pcs
1200	03.02.410	03.02.510	03.02.810	100pcs



# DiaNi Diamond Disc

Diamond discs are nickel plated bond, extremely durable and very fast grinding speed. Recommended for steel, hard metals, glass and minerals.



FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
80	04.01.110S	04.01.210S	04.01.310S	1pc
120	04.01.120S	04.01.220S	04.01.320S	1pc
200	04.01.125S	04.01.225S	04.01.325S	1pc
400	04.01.130S	04.01.230S	04.01.330S	1pc
800	04.01.140S	04.01.240S	04.01.340S	1pc
1200	04.01.150S	04.01.250S	04.01.350S	1pc

# DiaRe Diamond Disc

Diamond discs are resin bond, recommended for most of the materials. Very long service life, no need dressing.



FEPA(Grit)	8 inch(200mm)	10 inch(250mm)	12 inch(300mm)	Package
80	04.02.110S	04.02.210S	04.02.310S	1pc
120	04.02.120S	04.02.220S	04.02.320S	1pc
200	04.02.125S	04.02.225S	04.02.325S	1pc
400	04.02.130S	04.02.230S	04.02.330S	1pc
800	04.02.140S	04.02.240S	04.02.340S	1pc
1500	04.02.150S	04.02.250S	04.02.350S	1pc
3000	04.02.160S	04.02.260S	04.02.360S	1pc
5000	04.02.170S	04.02.270S	04.02.370S	1pc

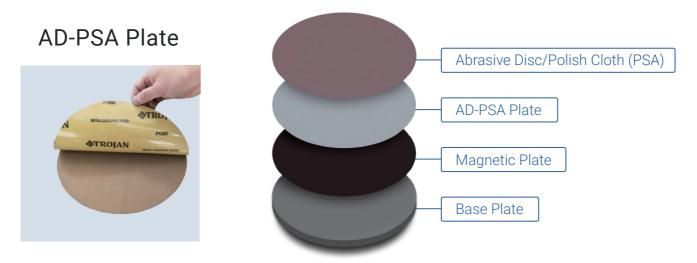
# PF Diamond Polishing Film

Trojan PF precision diamond polishing film series are mainly used for polishing optical fiber inserts, chips and other materials and metallographic samples. Among them, 0-30 microns are suitable for rough grinding, 3 microns and 1 micron are suitable for obtaining fine surfaces.



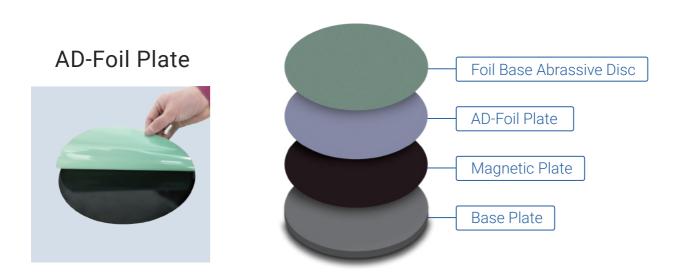
Order No:	Description	Micron	Package
14.01.461	200mm	1um	1pc
14.01.462	200mm	3um	1pc
14.01.463	200mm	бит	1pc
14.01.464	200mm	9um	1pc
14.01.465	200mm	15um	1pc
14.01.466	200mm	30um	1pc





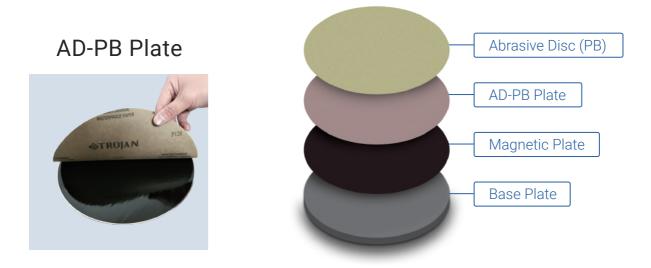
The **AD-PSA** system allows adhesive backed abrasive discs/polishing cloths to be easily removed and no residual left.

Order No:	Description	Package
04.08.410	200mm	1pc
04.08.413	250mm	1pc
04.08.420	300mm	1pc



The **AD-Foil** system is for Foil base abrasive SIC disc or diamond disc. If the AD-Foil transfer plate is dirty, just washing with water.

Order No:	Description	Package
04.08.422	200mm	1рс
04.08.430	250mm	1pc
04.08.432	300mm	1рс

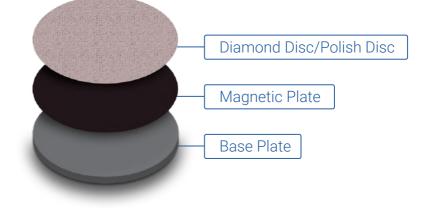


The **AD-PB** system is for Plainback abrasive SiC disc or diamond disc. If the AD-PB transfer plate is dirty, just washing with water.

Order No:	Description	Package
04.08.310	200mm	1pc
04.08.320	250mm	1рс
04.08.330	300mm	1pc

#### Magnetic Plate





The **Magnetic** floppy plate is attached to the chassis of the grinder and can firmly adsorb various conversion plates (AD-PSA, AD-PB, AD-Foil Plate).

Order No:	Description	Package
04.08.010	200mm	1pc
04.08.020	250mm	1pc
04.08.030	300mm	1pc



#### **ZN-ZP** Black Polyurethane Polishing Cloth(PSA)

It is low-napped,used for chemical/mechanical polishing.Recommend to use with Trojan 0.02-1um silica or alumina polishing suspension.

Order No:	Description	Package
05.01.110	8 inch, Black, Polyurethane	10pcs
05.01.120	10inch, Black, Polyurethane	10pcs
05.01.130	12inch, Black, Polyurethane	10pcs

#### **SR-ZP** Red Synthetic Fabric Polishing Cloth(PSA)

Used for most materials fine or final polishing.Recommend to use with Trojan 0.3 - 3.0 um alumina or diamond suspension.

Order No:	Description	Package
05.02.150	8 inch, Red, Synthetic Fabric	10pcs
05.02.160	10 inch, Red, Synthetic Fabric	10pcs
05.02.170	12 inch, Red, Synthetic Fabric	10pcs

#### ET-JP White Synthetic Velvet Polishing Cloth(PSA)

Used for soft materials such as copper,tin,resin,PCB,SMT,semiconductor final polishing.Recommend to use with Trojan 0.05-3.0um,alumina suspension or alumina powder.

Order No:	Description	Package
05.03.210	8 inch, White, Synthetic Velvet	10pcs
05.03.220	10 inch, White, Synthetic Velvet	10pcs
05.03.230	12 inch, White, Synthetic Velvet	10pcs

#### YR-JP Brown Synthetic Rayon Polishing Cloth(PSA)

Used for ferrous and non-ferrous metals such as composites, polymers, cast irons, ceramics, carbides and PCB intermediate or fine polishing. Recommend to use with Trojan 0.05-3.0 um diamond suspension, alumina suspension or alumina powder.

Order No:	Description	Package
05.04.310	8 inch, Grey, Synthetic Rayon Fibers	10pcs
05.04.320	10 inch, Grey, Synthetic Rayon Fibers	10pcs
05.04.330	12 inch, Grey, Synthetic Rayon Fibers	10pcs

#### **YS-JP** White Fiber Polishing Cloth(PSA)

Used for copper,aluminum,tin and softer ferrous metals fine polishing. Recommend to use with TROJAN 1-6um diamond suspension or spray.

Order No:	Description	Package
05.07.710	8 inch, White	10pcs
05.07.720	10 inch, White	10pcs
05.07.730	12 inch, White	10pcs

#### **GF-JP** White Synthetin Silk Polishing Cloth(PSA)

Suitable for ferrous metals intermediate polishing.Recommend to use with TROJAN 3-9 um diamond suspension or spray.

Order No:	Description	Package
05.10.010	8 inch, White	10pcs
05.10.020	10 inch, White	10pcs
05.10.030	12 inch, White	10pcs

#### SC-JP White Natural Silk Polishing Cloth(PSA)

Suitable for ferrous metals intermediate or fine polishing. Recommend to use with Trojan 0.5-6.0 um diamond suspension.

Order No:	Description	Package
05.05.510	8 inch, White	10pcs
05.05.520	10 inch, White	10pcs
05.05.530	12 inch, White	10pcs

#### CS-JP Blue Synthetin Silk Polishing Cloth(PSA)

Suitable for ferrous and non-ferrous metal, plating and plastic, fine polishing. Recommend to use with TROJAN 0.5-6 um diamond suspension or spray.

Order No:	Description	Package
05.12.110	8 inch, Blue	10pcs
05.12.120	10 inch, Blue	10pcs
05.12.130	12 inch, Blue	10pcs

#### Final Red Final precision polishing cloth (Adhesive Back)

It is widely used in precision polishing of electronic components, especially for SEM or TEM evaluation materials. It is recommended to use it with Trojan diamond polishing suspension (less than 3um) and colloidal suspensions or alumina suspension.



	Rough F	Polishing	Fine Polishing			Final Polishing				
Model	NL-CP	GF-JP	SC-JP	YS-JP	CS-JP	SR-JP	ET-JP	YR-JP	Final-Red	ZN-JP
Recommended Granularity	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 Metal	**	**	**	*	**	**	*	-	-	**
Steel	**	**	**	**	**	**	*	*	*	**
Compound Material	-	*	**	*	*	*	**	**	**	**
Mineral	**	*	*	*	**	*	*	*	-	*
Spray Coating	-	**	*	*	**	**	**	**	-	**
Grey Cast iron	**	**	**	**	**	**	*	*	-	**
Copper Alloy	-	*	*	**	**	**	**	**	**	**
Aluminium Alloy	-	*	*	**	**	**	**	**	**	**
Soft Metal	-	*	*	**	**	**	**	**	**	**
Non iron Based Materials	-	*	**	**	*	*	*	*	-	**
Electronic Materials	-	**	*	_	*	**	**	**	**	**
Plastic	-	-	*	-	*	**	**	**	*	**

# Application of polishing cloth

★★ Excellent ★ Good

**Grinding/Polishing** 

# Material application

Material	Picture	Grinding steps	Polishing material	Polishing material 1	Polishing steps 2	Polishing steps 3
			Polishing cloth	SC Polishing cloth	ET Polishing cloth	ZN Polishing cloth
PCB and SMT		TROJAN abrasive paper P180-P400-P800-P1200-	granularity	1µm MD-W	0.05µm AO-W	0.05µm SO-A439
		P2500-P4000	Abrasive / cooling	Diamond polishing suspension	Alumina polishing suspension	Silica polishing suspension
		TROJAN abrasive paper	Polishing cloth	SC Polishing cloth	Final Red Polishing cloth	ZN Polishing cloth
Semiconductor Material		P180-P400-P800-P1200-	granularity	1µm MD-W	0.05 Super-Alumina	0.05µm SO-A439
Wateria		P2500-P4000	Abrasive / cooling	Diamond polishing suspension	Alumina polishing suspension	Silica polishing suspension
		TROJAN abrasive paper	Polishing cloth	SC Polishing cloth	ET Polishing cloth	ZN Polishing cloth
Microelectronic Materials		P180-P400-P800-P2000-	granularity	1µm MD-W	0.3µm AO-W	0.05µm SO-A439
Materials		P4000	Abrasive / cooling	Diamond polishing suspension	Alumina polishing suspension	Silica polishing suspension
		Method 1: DiaRe Grinding disc	Polishing cloth	NL Polishing cloth	CS Polishing cloth	CS Polishing cloth
Ceramics and rocks	-	P120-P400-P800 Method 2:	granularity	9µm MD-W	3µm MD-W	1µm MD-W
		DiaNi Grinding disc P120-P400-P800-P1200	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Diamond polishing suspension
		Method 1: TROJAN abrasive paper	Polishing cloth	NL Polishing cloth	SC Polishing cloth	ZN Polishing cloth
Metal thermal spraying	6.37juni	P180-P400-P800 Method 2:	granularity	9µm MD-W	3µm MD-W	0.05µm SO-A439
		DiaRe Grinding disc P120-P400-P800-P1200	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	
		Method 1:	Polishing cloth	NL Polishing cloth	SC Polishing cloth	ZN Polishing cloth
Ceramic thermal spray		DiaRe Grinding disc P120-P400-P800	granularity	9µm MD-W	3µm MD-W	0.05µm SO-A439
opidy	The shirt of the set		Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Silica polishing suspension
		Method 1: DiaRe Grinding disc P120-P400-P800	Polishing cloth	NL Polishing cloth	CS Polishing cloth	ZN Polishing cloth
Cemented carbide	STRATES AGE	Method 2: DiaNi Grinding disc	granularity	9µm MD-W	3µm MD-W	0.05µm SO-A439
		P120-P400-P800-P1200	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Silica polishing suspension
		TROJAN	Polishing cloth	YS Polishing cloth	SR Polishing cloth	ZN Polishing cloth
Aluminium alloy		abrasive paper P180-P400-P800-P1200-	granularity	3µm MD-W	1µm MD-W	0.05µm SO-A439
		P2500	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Silica polishing suspension
<b></b>	11 100	TROJAN abrasive paper	Polishing cloth	GF Polishing cloth	ZN Polishing cloth	
Titanium alloy		P180-P400-P800-P1200-	granularity	3µm MD-W Diamond polishing	0.05µm SO-T401 Silica polishing	
		P2500	Abrasive / cooling	suspension	suspension "	
Copper and		TROJAN abrasive paper	Polishing cloth	GF Polishing cloth	CS Polishing cloth	ZN Polishing cloth
copper alloys		P180-P400-P800-P2000- P4000	granularity	3µm MD-W Diamond polishing	1µm MD-W Diamond polishing	0.05µm SO-A439 Silica polishing
	Method 1:	Abrasive / cooling	suspension	suspension	suspension	
		DiaRe Grinding disc P120-P400-P800	Polishing cloth	SC Polishing cloth	SC Polishing cloth	ET Polishing cloth
Hard steel		Method 2: DiaNi Grinding disc	granularity Abrasive / cooling	3µm MD-W Diamond polishing suspension	1µm MD-W Diamond polishing suspension	0.05µm AO-W Alumina polishing suspension
	I LANY COPIL	P120-P400-P1200		NL Polishing cloth		·
Mild steel	CHARLES .	TROJAN	Polishing cloth granularity	9µm MD-W	CS Polishing cloth	ET Polishing cloth
Wild Steel	DAN AND	abrasive paper P180-P400-P800	Abrasive / cooling	Diamond polishing	Diamond polishing	Alumina polishing suspension
			Polishing cloth	suspension GF Polishing cloth	Suspension CS Polishing cloth	ET Polishing cloth
Cast iron		TROJAN abrasive paper	granularity	3μm MD-W	1µm MD-W	0.05µm AO-W
04011011		P180-P400-P800-P1200	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Alumina polishing suspension
		Method 1:	Polishing cloth	NL Polishing cloth	SR Polishing cloth	suspension
Heat treated steel		DiaRe Grinding disc P120-P400-P800 Method 2:	granularity	9µm MD-W	1µm MD-W	
		TROJAN abrasive paper P180-P400-P800	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	
	AN ALL MANAGER	Method 1: DiaRe Grinding disc	Polishing cloth	GF Polishing cloth	SR Polishing cloth	ZN Polishing cloth
Stainless steel and		P120-P400-P800 Method 2:	granularity	3µm MD-W	1µm MD-W	0.05µm SO-A439
maraging steel		TROJAN abrasive paper P400-P800-P1200	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Silica polishing suspension
	35.19 27-		Polishing cloth	SC Polishing cloth	CS Polishing cloth	ET Polishing cloth
Polymer matrix		TROJAN abrasive paper P180-P400-P800-P2000	granularity	3µm MD-W	1µm MD-W	0.05µm AO-W
composites	M. C. S. MA		Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Alumina polishing suspension
		Mathed 1:	Polishing cloth	GF Polishing cloth	SR Polishing cloth	ET Polishing cloth
General batch		Method 1: DiaRe Grinding disc	granularity	3µm MD-W	1µm MD-W	0.05µm AO-W
sample		P180-P400-P800-P2000	Abrasive / cooling	Diamond polishing suspension	Diamond polishing suspension	Alumina polishing suspension

# Polishing Consumables

The diamond suspensions contain heavy concentration of monocrystalline or polycrystalline diamond. The suspension is stable which is excellent for distributing diamond easily and uniformly over the cloth or platen surface.

# **MD-W** Monocrystalline Diamond Suspension

Water-based diamond suspension, used for polishing most materials.

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

# **PD-W** Polycrystalline Diamond Suspension

Water-base diamond suspension, loffering better polishing surface and faster polishing rate when using the same grit.

<b>PD-W</b> Polycrystalline Diamonu Suspension	
Water-base diamond suspension loffering better polishing	

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

# **PL-W** Polishing Lubricants

Lubricant is used to enhance polishing performance of diamond suspensions,compounds,sprays and films.It reduces friction and increase the life of polishing clothes.It can be applied manually or used with automatic dispenser.

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



# AO-P Alumina Suspension

It is a water based stable suspension.Used for copper,tin and other soft metal or plastic material,such as PCB,SMT, semiconductor.



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

# Monocrystalline Diamond Paste

Water based monocrystalline diamond paste, high polish speed, good polish surface.



Order No:	Description	Package
06.10.030	1um/Blue	5g
06.10.040	3um/Green	5g
06.10.050	бит/Yellow	5g
06.10.060	9um/Red	5g

# Polycrystalline Diamond Paste

Water based polycrystalline diamond paste, high polish speed, better polish surface.

Order No:	Description	Package
06.10.110	1um/Black	10g
06.10.130	3um/Black	10g
06.10.160	6um/Black	10g
06.10.190	9um/Black	10g

# SP-D Monocrystalline Diamond Spray



Simple to use, convenient, with polishing efficiency.

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



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# Grinding/Polishing

#### **AO-P** De-agglomerated Alumina Polishing Powder

The alumina polishing powder is de-agglomerated, strict particle size distribution. Mix the powder with DI water before use.

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

# SO T401 Non-Crystallizing Silica

Use for the final polishing.

Non-crystallizing silica suspension with 10.5 PH,provides a chemical-mechanical polishing action for Titanium, Stainless Steel etc.

Order No:	Description	Package
06.05.310	50nm	500ml
06.05.320	50nm	1000ml
06.05.330	50nm	5000ml

# SO A439 Non-Crystallizing Silica

Use for the final polishing.

Non-crystallizing silica suspension with 10.2 PH,provides a chemical-mechanical polishing action for a wide variety of materials,such as nonferrous metals,aluminium,PCB and ICS etc.

Order No:	Description	Package
06.07.310	50nm	500ml
06.07.320	50nm	1000ml
06.07.330	50nm	5000ml









# 

Advanced microscope products can be equipped with specific digital micrograph devices to ensure high resolution and accurate color restoration of images. Users are free to create work schemes to meet the workflow and other needs of different environments. While the users are concentrating on their work, we also provide users with a variety of convenient and time-saving tools to make daily routine work easier.



**MN 60** Series has been designed with modularity to meet vairous industrial and materials science applications. It gives users flexibility to build a system for specific needs.





Item	MN 60	
MN 60 manual halogen lamp host (add TR transmission electrical appliances)	12V100W	
10x interface $\Phi$ 30, Adjustable eyepiece	25 field of view, high eye-point, adjustable from -5 $\sim$ +5	
Trinocular inclinable observation lens (200 tube lens)	Hinged triocular barrel, 0-35 degree tilt, pupil distance 47-78mm;Eyepiece /photo (100/0, 20/80, 0/100)	
Sextuple A manual Nosepiece	M25×0.75	
NIS45 series Semi Apo Achromatic metallographic objective	Tube lens 200mm, focal length 45mm,M26×0.7, cover glass 0	
5X Semi Apo Achromatic metallographic objective	NA=0.15 WD=20, light and dark field	
10X Semi Apo Achromatic metallographic objective	NA=0.3 WD=11, light and dark field	
20X Semi Apo Achromatic metallographic objective	NA=0.45 WD=3.0, light and dark field	
50X Semi Apo Achromatic metallographic objective	NA=0.8 WD=1, light and dark field	
100X Semi Apo Achromatic metallographic objective	NA=0.9 WD=1, light and dark field	
4" Cargo platform - right hand	1. Mobile range 4 "X4" (105X105), 1mm/ grid, accuracy 1mm;2.Adopt hard oxidation surface to prevent wear 3.Y direction can be locked;4.Size: 210 (X) x170 (Y) mm	
Loading glass substrate	Size: 145 (X) x152 (Y) mm	
Long distance condenser	Metal microscope transmission, NA0.65 WD 10.2	
Color temperature sheet (transmission)	Ф45	
Green filter (Transmission)	Ф45	
Yellow filter (transmission)	Ф45	
Metallographic vertical illuminator	Kohler lighting, halogen free lamp room	
100W halogen lamp room	12V100W	
light Field Observation module 1	Built-in density chip, placed switch type glare	

#### MN 50B series microscope

Meets all your requirement by High performance optical system,technological innovation,high stability,It also can be easily upgraded,for example DIC Viewing.





		MS 500
Optical Syatem	Infinite optical system	Standard Outfit
	WF10X/22	Standard Outfit
Extra Wide Field	WF10X/22,Eyepiece with Scale of Cross hair	Standard Outfit
Eyepiece	WF15X/16	Optional
	WF20X/12	Optional
	5X/0.12/∞/0 (BF/DF) LWD 10mm	Standard Outfit
	10X/0.25/∞/0 (BF/DF) LWD 10mm	Standard Outfit
Infinite LWD Plan	20X/0.4/∞/0 (BF/DF) LWD 5mm	Standard Outfit
Achromatic Objective	50X/0.75/∞/0 (BF/DF) LWD 1.3mm	Standard Outfit
	100X/0.9/∞/0 (BF/DF) LWD 0.7mm	Standard Outfit
Viewing Head	Siedentopf binocular viewing head, Inclined at 30°, Interpupillary 48mm-75mm	Standard Outfit
	12V/50W Halogen light, Center and brightness adjustable	Standard Outfit
Kobler Incident Light	Polarizer and analyzer	Standard Outfit
Kohler Incident Light	DIC	Optional
	Built-in Green,Blue,Yellow,Gray and ground glass	Standard Outfit
Focusing	Coaxial coarse and fine adjustment, fine division $2\mu m$	Standard Outfit
Converter	Backward quintuple nosepiece	Standard Outfit
Stage	Double layer mechanical stage 226X178mm, Moving range 40mmX40mm	Standard Outfit
Stage	Stage: Ф20,Ф30,Teardrop	Standard Outfit
Accessories	Photo/Video Attachment	Optional
Accessores	Micrometer Scale 0.01mm	Standard Outfit



#### 560RSSZ/V3.0 Fully Automatic Rockwell Hardness Tester

Suitable for quenched steel, tempered steel, annealed steel, cold and hard casting, malleable cast iron, hard alloy steel, aluminum alloy, copper alloy, bearing steel etc. Also suitable for surface quenched steel, surface heat treating and chemical treating materials, sheet, zinc layers, chrome layers, tin layers etc.



#### • Features

- Support for all the Rockwell and superficial Rockwell scales;
- Support for conversion scales of different kinds of hardness;
- With arc correction function;
- Touch screen display and operation, dynamically display the working state of the lifting screw and the indenter;
- Controlled by the computer, full range of XYZ mobile, fast and accurate;
- One key to complete the rising of the specimen, loading dwell and unloading of the indenter, displaying of the hardness value, homing of the test table; With the X-Y motorized test table, it can do the continuous test according to the path setting;
- With data storage function, automatic calculation of the maximum, minimum, average of the hardness value, the test results can be selected to delete and print out, and the software can generate the WORD report.



Model	560RSSZ/V3.0
Initial Test Force	3kgf (29.42N), 10kgf (98.07N)
Total Test Force	15kgf (147.1N), 30kgf (294.2N), 45kgf (441.3N), 60kgf (588.4N), 100kgf (980.7N), 150kgf (1471N)
Indenter	Diamond Rockwell Indenter, Φ1.588mmBall Indenter
Loading Method	Automatic (Loading/Dwell/Unloading)
X-Y Test Table	Size: 250*160mm, Travel: 100*100mm, Dimension: 365*300*140mm, Resolution: 1µm
Operation	The test table has multi-point settings, one key operation to achieve multi-point automatic test function. And it can add other functions according to customers' requirement!
	Automatic or Manual Lifting Screw, Automatic Rising and Homing, One Key to Complete
Display	Touch Screen, Menu Selection, Hardness Display, Parameter Setting, Data Statistics, Storage, etc.
Data Statistics	Test Number, Average/Maximum/Minimum Value, Repeatability, Set Upper and Lower Limits of Hardness Value with Warning Function, etc.
Test Scale	HRA, HRD, HRC, HRFW, HRBW, HRGW, HRHW, HREW, HRKW, HRL, HRM, HRP, HRR, HRS, HRVHR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Conversion Scale	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW
Data Output	USB Interface, RS232 Interface
Hardness Resolution	0.1HR
Dwell Time	0~99s
Max. Sample Height	210mm
Throat Depth	150mm
Power Supply	AC220V, 50Hz
Execute Standard	ISO 6508, ASTM E18, JIS Z2245, GB/T 230.2
Dimension	535*410*890mm, Packing Dimension: 820*460*1170mm
Weight,kg	85, Gross Weight: 105

#### XHBT-3000Z III Fully Automatic Three Indenters Digital Brinell Hardness Tester

Suitable for cast iron, steel products, nonferrous metals and soft alloys etc. Also suitable for some nonmetal materials such as rigid plastics and bakelite etc.





- This instrument has 10 level of test force, 13 Brinell hardness test scales, suitable for different kinds of metal materials;
- With three indenters and two objectives, no need to change the indenters when testing different samples; with rigorous optical structure and high magnification, it makes the indentation observed clearly;
- According to the selected scale, with automatic shifting the instrument will automatically select the corresponding indenter and objective for measurement;
- The automatic lifting test table adopts precise structure with high stability, it automatically
  rises when start measuring, and then back to the focusing position for measuring after loading
  the test force, which realizes the one key automation;
- It adopts the integrated design of hardness tester and panel computer; With Windows operating system, it has all functions of computer;
- With CCD image measuring system, touch screen operating and displaying, it can preset the test force dwell time, adjust intensity of light source, show the indentation length, hardness value, test range and test number etc.;
- The software has the function of calibration, manual fine tuning and set up and down limit etc., which ensures the accuracy of measurement;
- Conversion scales of different kinds of hardness;
- Test result can be saved as WORD or EXCEL report and can be printed out;
- With USB port, VGA interface and network interface, it can connect to the internet and other devices for more optional functions.



Model		XHBT-3000Z III	
Test Force	kgf	62.5kgf, 100kgf, 125kgf, 187.5kgf, 250kgf, 500kgf, 750kgf, 1000kgf, 1500kgf, 3000kgf	
	Ν	612.9N, 980.7N, 1226N, 1839N, 2452N, 4903N, 7355N, 9807N, 14710N, 29420N	
Test	Range	3.18~653HBW	
Loading	Method	Automatic (Loading/Dwell/Unloading)	
Hardness	s Reading	12 inch Touch Screen, Automatic Measuring	
Micro Computer		CPU: Intel I5, Memory: 8G, SSD: 128G	
CCD	Pixel	3.00Million	
Conversion Scale		HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBS, HBW	
Data Output		3×USB, 1×VGA, 1×LAN	
Turret		Automatic Recognition and Shifting (Three Indenters, Two Objectives)	
Obje	ective	1×, 2×	
Effective Field of View		1×:6mm, 2×:3mm	
Min. Meas	suring Unit	1×:4.6µm, 2×:2.3µm	
Dwell Time Max. Sample Height Throat Depth Power Supply		0~99s	
		290mm	
		150mm	
		AC220V,50Hz	
Execute	Standard	ISO 6506,ASTM E10,JIS Z2243,GB/T 231.2	
Dime	ension	690×360×1000mm, Packing Dimension: 830*490×1300mm	
We	ight	Net Weight: 200kg,Gross Weight: 230kg	

#### XHVT-10Z/30Z/50ZV3.0 Fully Automatic Vickers Hardness Tester

Suitable for ferrous metal, non-ferrous metals, IC thin sections, coatings, ply-metals; glass, ceramics, agate, precious stones, thin plastic sections etc.; hardness testing such as that on the depth and the trapezium of the carbonized layers and quench hardened layers.



## **Features**

- All the testing parameters can be selected on the panel computer. With touching screen, it operates quickly and conveniently and displays clearly and intuitively.
- With CCD image acquisition system, it shows the image clearly and gets the hardness value just by touching the screen.
- Automatic recognition and shifting between the objective and the indenter, automatically get the Vickers hardness value.
- With the function of hardness scale conversion.
- The system has two languages: English and Chinese.
- With USB, VGA and LAN interfaces, the hardness measurement can be print out by USB interface.
- It can automatically save the measuring data, generate the hardness-depth curve and save as WORD or EXCEL document.
- With motorized X-Y test table, automatic focusing and automatic measuring, it realizes the fully automation of Vickers hardness testing.



Model	XHVT-10Z / 30Z / 50Z / V3.0
Test Force	Kgf,N
XHVT-10Z / V3.0	0.2kgf, 0.3kgf, 0.5kgf, 1kgf, 2kgf, 2.5kgf, 3kgf, 5kgf, 10kgf 1.96N, 2.94N, 4.90N, 9.80N, 19.6N, 24.5N, 29.4N, 49N, 98N
XHVT-30Z / V3.0	0.3kgf, 0.5kgf, 1kgf, 2kgf, 2.5kgf, 3kgf, 5kgf, 10kgf, 20kgf, 30kgf 2.94N, 4.90N, 9.80N, 19.6N, 24.5N, 29.4N, 49N, 98N, 196N, 294N
XHVT-50Z / V3.0	0.5kgf, 1kgf, 2kgf, 2.5kgf, 3kgf, 5kgf, 10kgf, 20kgf, 30kgf, 50kgf 4.90N, 9.80N, 19.6N, 24.5N, 29.4N, 49N, 98N, 196N, 294N, 490N
Test Mode	HV/HK
Test Range	1HV~2967HV
Loading Method	Automatic (Loading/Dwell/Unloading)
Turret	Automatic Shifting
Computer	CPU: Intel 15, Memory: 8G, SSD: 240G
CCD Pixel	1.30Million
Conversion Scale	HV, HK, HRA, HRBW, HRC, HRD, HREW, HRFW, HRGW, HRKW, HR15N, HR30N, HR45N, HR15TW, HR30TW, HR45TW, HS, HBW
Hardness Reading	Indentation Display and Automatic Measuring on Touch Screen
Data Output	WORD or EXCEL Report with Curve Chart
Objective	10×,20×,40×
Effective Field of View	10×: 680μm, 20×: 340μm, 40×: 170μm
Min. Measuring Unit	10×: 0.1μm, 20×: 0.05μm, 40×: 0.025μm
Dwell Time	0~60s
Light Source	Halogen Lamp
Motorized X-Y Test Table	Size: 110×110mm; Travel: 50×50mm; Resolution: 0.002mm
Max. Sample Height	170mm
Throat Depth	130mm
Power Supply	AC220V,50Hz
Execute Standard	ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2
Dimension	560*335*675mm, Packing Dimension: 650*380*960mm
Weight	Net Weight: 52kg, Gross Weight: 67kg



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Side table





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