



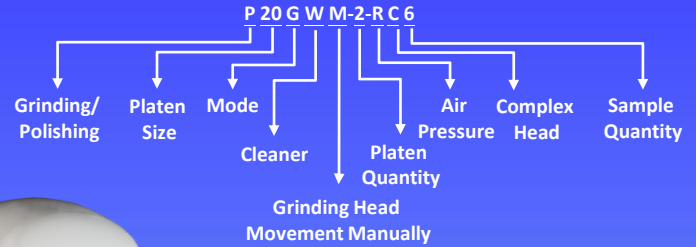
TOP TECH

P20GWM-2-RC6

Air-Pressure Grinding & Polishing Cleaner



Auto
Cleaning



P20GWM-2-RC6 Series

Patent

- Combine grinding, polishing, and sample cleaning functions
- Automatic cleaning process completed with one button
- Ultrasonic cleaning perfectly prevents cross-contamination during preparation
- Save over 60% of operator time
- Speed up the sample preparation process by nearly 10%
- 10 memory modules, each capable of storing 5 sets parameters
- Individual force

Perfect Surface. Always

Introduction & Feature



Adjustable head rotation speed

The head is equipped with a high-efficiency brushless motor, offering excellent stability and durability. The rotation speed of the head covers a wide range, from 10 to 170 rpm, allowing flexible adjustments based on the material and characteristics of the sample to meet the requirements of various materials.

Rinse and spin cleaning function

Equipped with a rinse and spin cleaning function, the machine can rapidly clean the surface of grinding and polishing consumables surface, ensuring immediate cleanliness after each sample preparation step. This design not only enhances operational convenience but also effectively reduces cleaning time, further accelerating the overall sample preparation process.

Micro-speed grinding and polishing function

The grinding speed can be precisely adjusted to as low as 1 rpm, making it ideal for long-duration precision grinding and polishing operations, especially for sample preparation requiring zero deformation.

Overload protection

Equipped with an automatic overload protection function, it monitors pressure during operation to ensure it does not exceed the factory-preset safety value. If the pressure goes beyond the safe range, the machine will immediately stop operation to prevent potential mechanical damage or sample deterioration, providing an additional protection.

Versatile platen options for various consumables

Available in two platen sizes, 8" and 10", allowing users to select the appropriate size and type based on sample requirements and experimental conditions. Grinding platens are suitable for use with consumables like waterproof SiC papers, while polishing platens are compatible with polishing cloths. Additionally, magnetic platens are available for flexible applications, meeting diverse sample preparation needs.



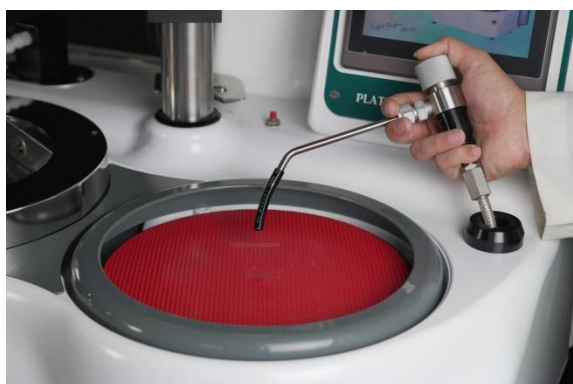
Introduction & Feature

Modular design

The modular control box system can be placed either behind or beside the machine, maximizing spatial flexibility. Thoughtful quick-release design simplifies maintenance service.

Retractable water spray design

Designed with a focus on operational flexibility and cleaning convenience, the water spray can be adjusted and retracted as needed. This allows direct rinsing of the platen and samples during cleaning, quickly removing dust and debris left from the grinding or polishing process.



Combine grinding, polishing, and sample cleaning functions

Not only equipped with grinding and polishing capabilities, but also provides a sample cleaning function, making it a multifunctional, all-in-one sample preparation machine. After grinding or polishing, operators can directly use the cleaning function to quickly remove residual dust and polishing liquids from the sample surface, significantly saving time and improving the efficiency of the sample preparation process.

Individual force: Digital control and stable air pressure supply

The pressure range is from 0.5 to 6 kilograms, allowing users to precisely set the appropriate pressure based on the characteristics of the sample and preparation requirements.

Precision micro-pressure adjustment (Option)

An optional precision micro-pressure adjustment feature is available, with a pressure range of 0.2 to 1 kilogram, specifically designed for sample preparation requiring delicate handling. This lightweight pressure application is ideal for fragile, sensitive, or low-pressure samples, ensuring no stress damage or deformation occurs during the preparation process.

Integrated dispenser system (Option)

An external integrated dispenser system can be connected, allowing users to easily set drip bottle parameters via the human-machine interface for precise and stable supply of polishing liquids. Users can adjust the dripping rate and time according to the sample material and polishing requirements, ensuring controllability and high reproducibility of the polishing process.



Introduction & Feature

Automatic cleaning process completed with one button

Users only need to press the cleaning button to complete the entire automatic cleaning process, eliminating the need for complex operation steps. The process is simple and user-friendly.

Save over 60% of operator time

Compared to traditional cleaning methods, users can easily complete the sample cleaning process with the one-touch automatic cleaning function, significantly reducing the time spent on manual cleaning by over 60%.

Speed up the sample preparation process by nearly 10%

Users can easily perform sample cleaning procedures without the need for additional time and effort compared to traditional cleaning methods. This significantly enhances the efficiency of sample preparation, accelerating the process by nearly 10%.

10 memory modules, each capable of storing 5 sets parameters

Equipped with a high-resolution color touch panel and an intuitive human-machine interface design, the system includes 10 memory modules, each capable of storing 5 sets different parameters. This allows users to quickly switch between and save various grinding programs with ease.

Ultrasonic Cleaning

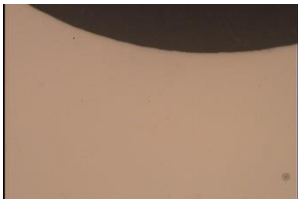

Combining automatic ultrasonic water cleaning and drying functions, the cleaning process can be performed without removing the sample platen or samples. This prevents cross-contamination during the preparation process and significantly improves work efficiency.



Specification

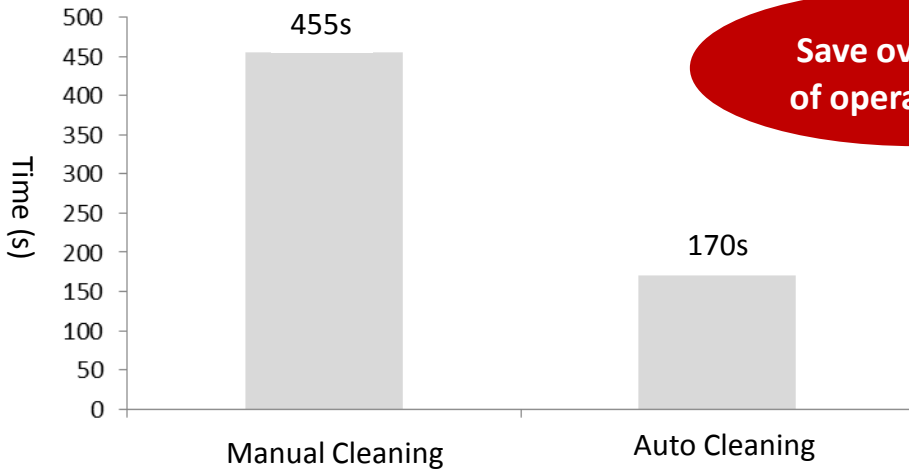
Model	P20GWM-2-RC6	P25GWM-2-RC6
Platen Size (mm)	Ø203.2 (8")	Ø254 (10")
Platen Quantity	1	
Sample Size/Quantity	Ø25mm, Ø25.4mm, Ø30mm, Ø31.75mm, Ø32mm/ 6pcs Ø38.1mm, Ø40mm/3pcs	Ø25mm, Ø25.4mm, Ø30mm, Ø31.75mm, Ø32mm/ 6pcs Ø38.1mm, Ø40mm/3 or 4pcs Ø45mm, Ø50mm/4pcs
Individual Force	0.5~2kg 6 pcs,	0.5~4kg 3 pcs,
Max. Grinding Quantity	0.5~6kg 2 pcs, Max. 12kg in total	
Platen Motor Power (W)	400	
Platen Rotational Speed (rpm)	1~600	
Head Motor Power (W)	50	
Head Rotational Speed (rpm)	10~170	
Cleaning Tank(set)	1	
Cleaning Method	Water & Air Pressure Drying	
Preparation Time Setting (s)	3600	
Cleaning Time Setting (s)	999	
Drying Time Setting (s)	999	
Memory Modules (set)	10 (Each set capable of storing 5 sets parameters)	
Water Inlet (mm)	Inner Dia.: 3/8" (Ø9.53mm), Outer Dia.: 19/32" (Ø15.08mm)	
Water Outlet (mm)	Inner Dia.: 1-19/64" (Ø32.94mm), Outer Dia.: 1-29/64" (Ø36.91mm)	
Machine Dimension WxDxH (mm)	955 x 680 x 700	
Machine Weight (kg)	112	114
Power Supply	AC 110V/220V 1Ø	
Standard Accessories	Grinding Platen 1pc, O-ring 1pc, Anti-Splash Cover (Standard) 1 pc, Silicon Carbide Paper 8 pcs, Polishing Cloth 2pcs, Aluminum Oxide Powder 100g, Filter 1 set, PU Pipes 6m, 500g Dispenser 1 pc, Air Pressure Gun 1 set	
Option	PA1-F1-04A Dispenser Set, PA0108-1-V01 8" Anti-Splash Cover (For manual type), PA0108 -V01 10" Anti-Splash Cover (For manual type), PA0108-3 8" Anti-Splash Cover (For auto type), PA0108-4 10" Anti-Splash Cover (For auto type), PA0108-2 Anti-Splash Cover (Full cover), PA0110A Anti-Splash Cover (Movable), P20F0026A-1 Dosing System	

Preparation Process Comparison

	Manual Cleaning	Auto Cleaning
Model	P20G-1-R6	P20GWM-2-RC6
P120 Diamond Disc	180s	180s
Sample Cleaning Time	About 70s (Total time spent for 6 samples)	About 70s (Ultrasonic cleaning: 20s, Air drying: 10s, Drainage: 40s)
9um Polishing (Diamond Disc + 9um Diamond Suspension)	180s	180s
Sample Cleaning Time	About 70s (Total time spent for 6 samples)	About 70s (Ultrasonic cleaning: 20s, Air drying: 10s, Drainage: 40s)
6um Polishing (Woven Polishing Cloth + 6um Diamond Suspension)	180s	180s
Sample Cleaning Time	About 70s (Total time spent for 6 samples)	About 70s (Ultrasonic cleaning: 20s, Air drying: 10s, Drainage: 40s)
1um Polishing (Polishing Cloth + 1um Diamond Suspension)	60s	60s
Sample Cleaning Time	About 70s (Total time spent for 6 samples)	About 70s (Ultrasonic cleaning: 20s, Air drying: 10s, Drainage: 40s)
Manual Labor Time	<p>The total manual labor time is 455s</p> <ul style="list-style-type: none"> Initial sample placement: 25s Sample cleaning: 70s per cycle, 4 cycles totaling 280s Changing platens and placing samples: 50s per cycle, 3 cycles totaling 150s 	<p>The total manual labor time is 170s</p> <ul style="list-style-type: none"> Initial sample placement: 25s Moving the grinding head: 10s per cycle, 7 cycles totaling 70s Changing platens: 25s per cycle, 3 cycles totaling 75s (Can be performed simultaneously during the automatic sample cleaning and drying process)
Total Time (Including grinding, polishing, and cleaning time)	<p>1055s</p> <ul style="list-style-type: none"> Grinding and polishing: 600s Cleaning, changing platens, and sample placement: 455s 	<p>975s</p> <ul style="list-style-type: none"> Grinding and polishing: 600s Initial grinding and sample placement: 25s Cleaning time: 280s Moving the grinding head: 70s
Metallographic Microstructure Image (Magnification: 50X)		

Preparation Process Comparison

Operator Time Comparison



Save over 60% of operator time

Note: During the automatic cleaning and drying process, manual platen replacement can be performed simultaneously. However, during manual cleaning process, platen replacement cannot be performed simultaneously.

Manual Labor Comparison: Auto Cleaning vs Manual Cleaning

Auto Cleaning → Manual Labor: 35s per cycle



Moving the grinding head
10s (Manually)



Platen replacement: 25s
Can be performed simultaneously with automatic ultrasonic cleaning



Automatic cleaning
No manual labor required

Manual Cleaning → Manual Labor: 120s per cycle



Manual cleaning
35s



Manual drying
35s



Platen replacement & sample placement
50s

Note: The above data is based on Top Tech's actual testing. The time may vary slightly depending on the operator.

Accessories (Optional)



Grinding Platen



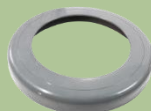
Polishing Platen



Magnetic Platen and Paper Hold



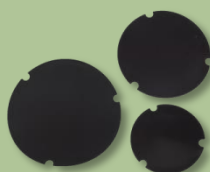
Anti-Splash Cover
(For manual type)



Anti-Splash Cover
(For auto type)



Anti-Splash Cover
(Full Cover)



Item	Order No.
Dispenser Set	PA1-F1-04A
Dropping Bottle	Y09006

Item	Order No.
Dosing System	P20F0026A-1

Item	Size	Order No.
Grinding Platen (Patent)	8"	CP0601
	10"	CP0602
Polishing Platen	8"	P20D00020101
	10"	P25A00010201
Magnetic Platen and Paper Hold (Patent)	8"	CP0501
	10"	CP0502

Item	Size	Order No.
Anti-Splash Cover (For manual type)	8"	PA0108-1-V01
	10"	PA0108-V01
Anti-Splash Cover (For auto type)	8"	PA0108-3
	10"	PA0108-4
Anti-Splash Cover (Full Cover)	-	PA0108-2
Anti-Splash Cover (Movable)	-	PA0110A

Item	Size	Order No.
Magnetic	8"	S080101
	10"	S080102



Item	Size	Order No.
Carrier Plate	8"	S090101
	10"	S090102

Precise Light Force (0.2~1kg)

Size (mm)	Sample Quantity	Order No.
Ø25	6	PA1-D2-625
Ø25.4	6	PA1-D2-625.4
Ø31.75	6	PA1-D2-631.75
Ø32	6	PA1-D2-632
Ø38.1	3	PA1-D2-338.1
Ø40	3	PA1-D2-340

Platen 250mm only

Ø38.1	4	PA1-D2-438.1
Ø40	4	PA1-D2-440
Ø50	4	PA1-D2-450

Central Force (3~12kg)

Size (mm)	Sample Quantity	Order No.
Ø25	6	PA1-D3-625
Ø25.4	6	PA1-D3-625.4
Ø31.75	6	PA1-D3-631.75
Ø32	6	PA1-D3-632
Ø38.1	3	PA1-D3-338.1
Ø40	3	PA1-D3-340

Platen 250mm only

Ø38.1	4	PA1-D3-438.1
Ø40	4	PA1-D3-440
Ø50	4	PA1-D3-450

Grinding & Polishing Cleaner Series

Grinding & Polishing



Cleaning



Grinding & Polishing & Cleaning

Spring Force

Air Pressure Force

Individual force without calibration

Individual force with calibration

Central force with calibration

Individual force

Individual force and central force

P20GWM-2-A3/A5

P20GWM-2-B3/B5

P20GWM-2-C3/C4

P20GWM-2-R6

P20GWM-2-RC6



Working Table (Optional)



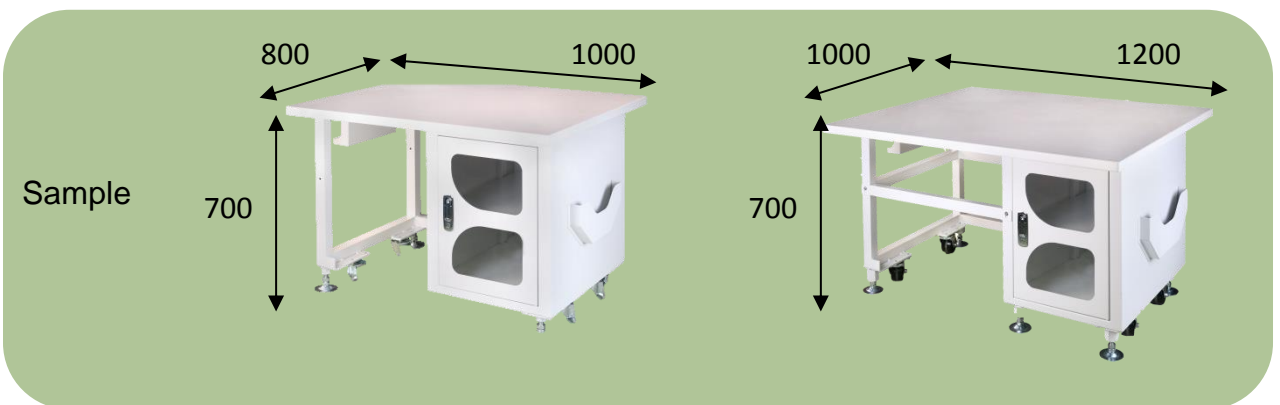
TF01

TF02

size(L*W*H)

1000*800*700 mm

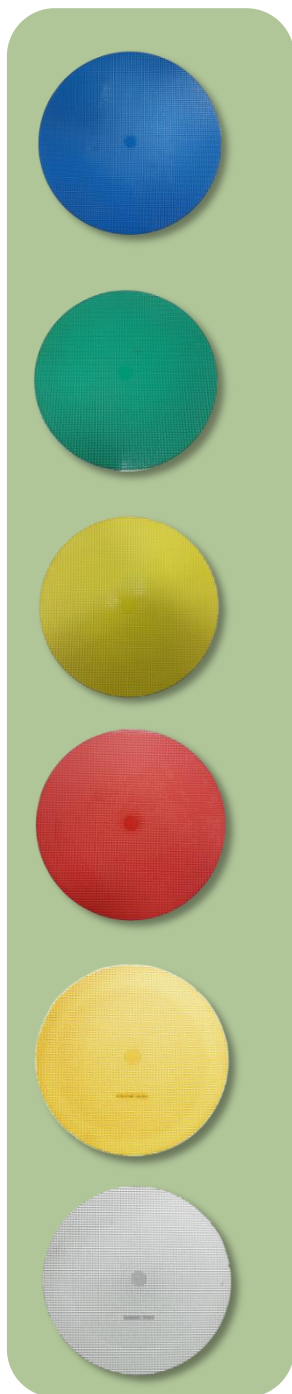
1200*1000*700 mm



(mm)

Consumable (Optional)

Diamond Disc



Ordering No.	Description	Magnetic Pad	Package (pc/box)
No. 1 Equivalent to SiC Paper of P120			
SAA09CA54020	8" (203mm)	●	1
SAA09CA54040	10" (254mm)	●	1
No. 2 Equivalent to SiC Paper of P240			
SAA09CA55020	8" (203mm)	●	1
SAA09CA55040	10" (254mm)	●	1
No. 3 Equivalent to SiC Paper of P600			
SAA09CA56020	8" (203mm)	●	1
SAA09CA56040	10" (254mm)	●	1
No. 4 Equivalent to SiC Paper of P1200			
SAA09CA58020	8" (203mm)	●	1
SAA09CA58040	10" (254mm)	●	1
No. 5 Without diamond particles, applied with diamond suspension for polishing (Suitable for general material)			
SAA09CA53020	8" (203mm)	●	2
SAA09CA53040	10" (254mm)	●	2
No. 6 Without diamond particles, applied with diamond suspension for polishing (Suitable for harder material)			
SAA09CA52020	8" (203mm)	●	2
SAA09CA52040	10" (254mm)	●	2

Consumable (Optional)

FEPA P SiC Paper (Plain Back)



	Size	Grain Size	Package (pcs/pack)
Order No.	Φ 200mm SiC Paper		
S0520002	8"(200mm)	P80	100
S0520003	8"(200mm)	P100	100
S0520004	8"(200mm)	P120	100
S0520005	8"(200mm)	P150	100
S0520006	8"(200mm)	P180	100
S0520007	8"(200mm)	P240	100
S0520008	8"(200mm)	P320	100
S0520009	8"(200mm)	P400	100
S0520010	8"(200mm)	P600	100
S0520011	8"(200mm)	P800	100
S0520012	8"(200mm)	P1000	100
S0520013	8"(200mm)	P1200	100
S0520014	8"(200mm)	P1500	100
S0520015	8"(200mm)	P2000	100



	Size	Grain Size	Package (pcs/pack)
Order No.	Φ 250mm SiC paper		
S0525002	10"(250mm)	P80	100
S0525003	10"(250mm)	P100	100
S0525006	10"(250mm)	P180	100
S0525007	10"(250mm)	P240	100
S0525008	10"(250mm)	P320	100
S0525009	10"(250mm)	P400	100
S0525010	10"(250mm)	P600	100
S0525011	10"(250mm)	P800	100
S0525012	10"(250mm)	P1000	100
S0525013	10"(250mm)	P1200	100
S0525014	10"(250mm)	P1500	100
S0525015	10"(250mm)	P2000	100

Consumable (Optional)

ANSI SiC Paper (Plain Back)



	Size	Grain Size	Package (pcs/pack)
Order No.	Φ 200mm SiC Paper		
S0520080060AU	8"(200mm)	#60	100
S0520080120AU	8"(200mm)	#120	100
S0520080180AU	8"(200mm)	#180	100
S0520080240AU	8"(200mm)	#240	100
S0520080320AU	8"(200mm)	#320	100
S0520080400AU	8"(200mm)	#400	100
S0520080600AU	8"(200mm)	#600	100
S0520080800AU	8"(200mm)	#800	100
S0520081000AU	8"(200mm)	#1000	100
S0520081200AU	8"(200mm)	#1200	100



	Size	Grain Size	Package (pcs/pack)
Order No.	Φ 250mm SiC Paper		
S0525100060AU	10"(250mm)	#60	100
S0525100120AU	10"(250mm)	#120	100
S0525100180AU	10"(250mm)	#180	100
S0525100240AU	10"(250mm)	#240	100
S0525100320AU	10"(250mm)	#320	100
S0525100400AU	10"(250mm)	#400	100
S0525100600AU	10"(250mm)	#600	100
S0525100800AU	10"(250mm)	#800	100
S0525101000AU	10"(250mm)	#1000	100
S0525101200AU	10"(250mm)	#1200	100

Consumable (Optional)

FEPA P SiC Paper (PSA Back)

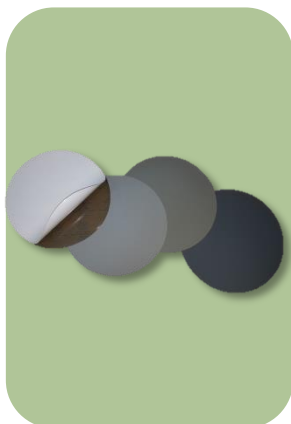


Order No.	Size	Grain Size	Package (pcs/pack)
	Φ 200mm SiC Paper		
S05A20006	8"(200mm)	P180	100
S05A20007	8"(200mm)	P240	100
S05A20008	8"(200mm)	P320	100
S05A20009	8"(200mm)	P400	100
S05A20010	8"(200mm)	P600	100
S05A20011	8"(200mm)	P800	100
S05A20012	8"(200mm)	P1000	100
S05A20013	8"(200mm)	P1200	100
S05A20014	8"(200mm)	P1500	100
S05A20015	8"(200mm)	P2000	100

Order No.	Size	Grain Size	Package (pcs/pack)
	Φ 250mm SiC Paper		
S05A25006	10"(250mm)	P180	100
S05A25007	10"(250mm)	P240	100
S05A25008	10"(250mm)	P320	100
S05A25009	10"(250mm)	P400	100
S05A25010	10"(250mm)	P600	100
S05A25011	10"(250mm)	P800	100
S05A25012	10"(250mm)	P1000	100
S05A25013	10"(250mm)	P1200	100
S05A25014	10"(250mm)	P1500	100
S05A25015	10"(250mm)	P2000	100

Consumable (Optional)

ANSI SiC Paper (Plain Back)



Order No.	Size	Grain Size	Package (pcs/pack)
	Φ 254mm SiC Paper		
S05A25100600AU	10" (254mm)	#600	100
S05A25100800AU	10" (254mm)	#800	100
S05A25101000AU	10" (254mm)	#1000	100
S05A25101200AU	10" (254mm)	#1200	100

Diamond Suspension



Order No.	Monocrystalline Diamond Suspension		
S0703080902	0.1um	300ml	Dark Gray
S0703030902	1um	300ml	Blue
S0703040902	3um	300ml	Green
S0703050902	6um	300ml	Yellow
S0703060902	9um	300ml	Red

Order No.	Polycrystalline Diamond Suspension		
S0708080402	0.1um	470ml	Black
S0708030402	1um	470ml	Black
S0708040402	3um	470ml	Black
S0708050402	6um	470ml	Black
S0708060402	9um	470ml	Black
S0708070402	15um	470ml	Black

Consumable (Optional)

Oxide and Final Suspension



Order No.	Aluminum Oxide Suspension	
-----------	---------------------------	--

S0707010902	0.05um	300 ml
S0707020902	0.3um	300 ml

Order No.	Final Polishing Suspension (Colloidal Silica)	
-----------	---	--

S0704C10902	0.04um	300 ml
-------------	--------	--------

Oxide Powder



Order No.	Aluminum oxide powder	
-----------	-----------------------	--

S0701010102	0.05um	1 lb
S07010201	0.3um	1 lb
S07010211	0.3um	2 lb
S07010301	1um	1 lb
S07010311	1um	2 lb
S07010401	3um	1 lb
S07011201	5um	1 lb

Order No.	Zirconium oxide powder	
-----------	------------------------	--

S07061009	0.5um	1 lb
S07061109	1.5um	1 lb

Consumable (Optional)

Polishing Cloths

Nylon



- Flock polishing cloth used for scratch removal, and polishing as high reflective as possible, suitable for most materials
- For fine polishing, it is recommended to use 0.3-6 μ m polishing suspension or colloidal silica.

Order No.	Size		Packing
S060101	Ø8"	Ø203mm	10
S060102	Ø10"	Ø254mm	10

Pellon



- Non-woven, with excellent removal rate and flatness, suitable for steel, composite materials, rocks, etc
- For rough and medium polishing, it is recommended to use 6-9 μ m polishing suspension.

Order No.	Size		Packing
S060301	Ø8"	Ø203mm	10
S060302	Ø10"	Ø254mm	10

PolyPadL



- Polyurethane polishing pads, used for removing stains in chemical mechanical polishing, suitable for various metals and glass
- For fine polishing, it is recommended to use colloidal silica.

Order No.	Size		Packing
S060701	Ø8"	Ø203mm	10
S060702	Ø10"	Ø254mm	10

PolyPadH



- Polyurethane polishing pads, used for removing stains in chemical mechanical polishing, suitable for various metals and glass
- For fine polishing, it is recommended to use colloidal silica.

Order No.	Size		Packing
S060801	Ø8"	Ø203mm	10
S060802	Ø10"	Ø254mm	10

Consumable (Optional)

FinalPad



- Soft fiber synthetic silk used for scratch removal, and polishing as high reflective as possible, suitable for most materials
- For fine polishing, it is recommended to use 0.3-6 μ m polishing suspension or colloidal silica.

Order No.	Size		Packing
S060901	Ø8"	Ø203mm	10
S060902	Ø10"	Ø254mm	10

Woven



- Woven natural fibers, with excellent removal rate and flatness, suitable for most materials
- For rough and medium polishing, it is recommended to use 3-9 μ m polishing suspension.

Order No.	Size		Packing
S061601	Ø8"	Ø203mm	5
S061602	Ø10"	Ø254mm	5

Top Tech distributors



TOP TECH



TOP TECH MACHINES CO.,LTD

No.6-3,Siayuan Rd.,Dali,Taichung,412 Taiwan

TEL: +886-4-2406-3799 FAX: +886-4-2406-0960

E-mail: top@toptech.tw <http://www.toptech.tw>

Agent

Top Tech reserves all the rights to change design without notice.

NO. EB4-BM01