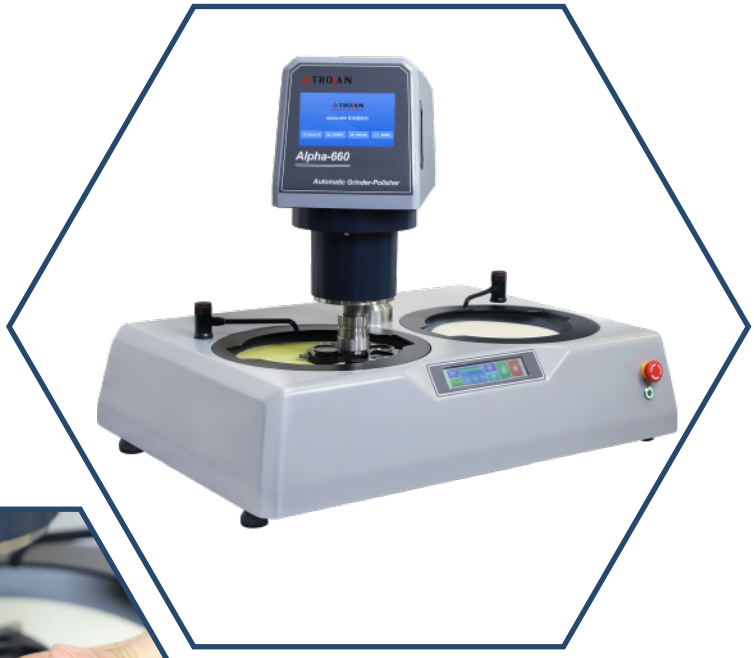
TROJAN
Discover the Truth of Material

# Alpha - 660 Dual-Disc Automatic Grinder and Polisher

GRINDING/POLISHING



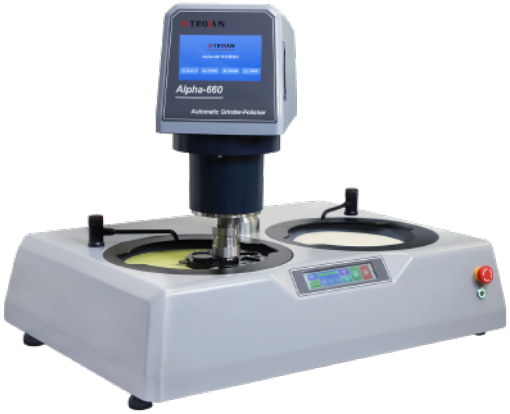



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TROJAN (SUZHOU) MATERIAL TECHNOLOGY CO.,LTD

# Alpha-660 Dual-Disc Automatic Grinder and Polisher

The Alpha-660 is a dual-disc manual-automatic grinder and polisher designed for precision sample preparation. It features independent motor drives for the head and polishing discs, supporting disc diameters from 200mm to 300mm. The machine offers two pressure modes: central and individual loading. An optional peristaltic pump system with up to four channels is available for precise dispensing of polishing solutions. The system allows for the programming and storage of up to 20 commonly used grinding and polishing procedures, ensuring consistent and reproducible results with ease and efficiency.



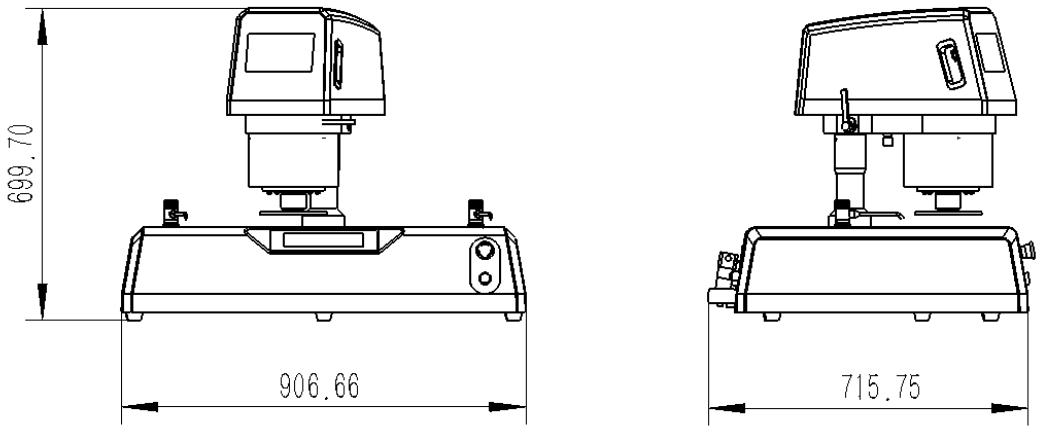

## Features:



- Constructed with a cast aluminum shell and SMC standard loading cylinders, the design is more reliable, robust, and durable;
- Features a 7-inch touchscreen panel with a user-friendly and intuitive interface;
- Dual-touchscreen design with independent control of dual motors, allowing simultaneous automatic and manual grinding;
- The sample holder height is adjusted using a dual-hand safety button, requiring simultaneous activation;
- Offers both central and individual loading options; central loading allows for precise, quantitative grinding;
- Optional peristaltic pump system with four channels for precise solution dispensing;
- Includes 20 pre-programmed grinding and polishing processes, with support for custom parameter storage;
- Equipped with a large-diameter side-outlet drainage system to prevent clogging and facilitate easy drainage;
- Features a detachable faucet design for easy cleaning and maintenance of the discs;
- Built-in automatic temperature-sensitive cooling fan reduces failure rates and extends service life.

## Dimension Figure

Unite: mm



## Technical Data:

| Model | | Alpha-660 |
|---|---|---|
| Grinding Head | Loading force | Central loading and Individual loading |
| | Central loading | 20-360N |
| | Individual loading | 5-60N |
| | Power | 220V, 750W |
| | Speed | 20-150rpm |
| | Direction | CCW/CW |
| Main Unit | Power | 220V, 2x750W |
| | Speed | 50-600rpm |
| | Diameter | 10″/254 (8″/203mm, 12″/305mm optional) |
| | Direction | CCW |
| Quantitative Function | Accuracy | ±0.1mm |
| | Quantitative height | 0.1mm-10mm |
| Dosing System (optional) | Type | Peristaltic pump, DC24V, 10W |
| | Flow | Maximum flow rate: 52ml/minute |
| | Amount | 4 |
| Clamping Disk | Individual loading | Standard: 6xΦ30mm(6xΦ32mm, 6xΦ40mm, 6xΦ50mm optional) |
| | Center loading | Standard: 8xΦ32mm(10xΦ25.4mm, 6xΦ40mm, 6xΦ50mm optional) |
| Environment | Temperature | -10˚C - 60˚C |
| | Humdity | 0-95%RH |
| Dimension | WxDxH | 716×907×700mm |
| Weight | | 65kg |

## Control Panel Introduction:

Home Screen:

❶ Procedures selection

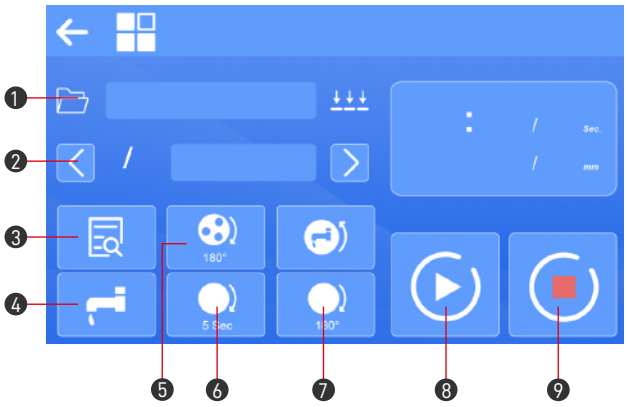
❷ Automatic mode (Run selected procedure)

❸ Manual mode

❹ Parameters settings

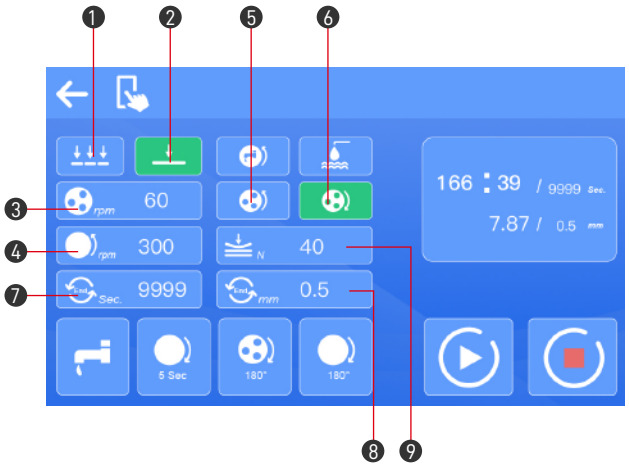


## Control Panel Introduction:




Automatic mode:

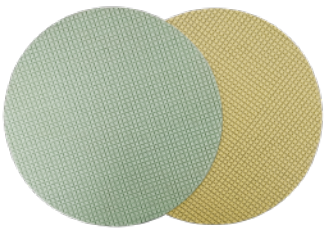
1. Select program
2. Select subroutine
3. Preview program
4. Turn on or off the faucet manually
5. Place the sample by manually rotating the clamping disk by 180°
6. Manual dumping
7. Rotate the working platen by 180° for sample removal
8. Start
9. Stop




Manual modeL:

1. Individual loading
2. Central loading
3. Speed setting for working platen（20-150）RPM
4. Speed setting for clamping disk（50-600）RPM
5. Forward rotation
6. Reverse rotation
7. Setting for running time（0-9999）sec
8. Quantitative grinding value (0.1-10) mm (optional)
9. Pressure setting, central pressure: (20-360) N. Individual pressure: (5-60) N

## Related Consumables & Accessories:



DiaRe Diamond Disc



Abrasive Paper



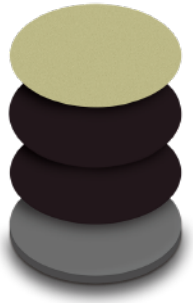
Polishing Cloth



Diamond Suspension



Alumina/Silica suspension



Adapter Plate System

## Standard Accessories:

| | | | | |
|---|---|---|---|---|
| 1 | Working wheel |  | 10”（254mm) | 2pc |
| 2 | Specimen holder for Individual force |  | Φ30 Specimen Holder | 1set |
| 3 | Inlet pipe |  | Φ8 PU pipe + filter | 2pc |
| 4 | Outlet pipe |  | Corrugated pipe with Φ32mm inner diameter and Clamp | 2pc |
| 5 | Air inlet pipe |  | Φ6mm PU pipe | 1pc |
| 6 | Disposable liner tray |  | | 2pc |
| 7 | Abrasive paper |  | 180#(250mm),400#(250mm),800#(250mm), 1200#(250mm),2500#(250mm) | 10 pcs each |
| 8 | Magnetic disk |  | Magnetic disk (250mm) | 2pc |
| 9 | Adapter system |  | AD–PB (250mm) | 2pc |
| 10 | Polishing cloth |  | ET–JP (250mm)<br>YS–JP (250mm) | 2 pc each |
| 11 | Power cord |  | 1.5m | 1pc |

## Optional Accessories:

| | | | |
|---|---|---|---|
| 1 | Working wheel |  | 8”（203mm）or 12”（305mm) |
| 2 | Circlip |  | 8”（203mm）or 12”（305mm) |
| 3 | Magnetic disk |  | Magnetic disk (200mm or 300mm) |
| 4 | Adapter System |  | AD–PB (200mm or 300mm) |
| 5 | Specimen holder for Individual force |  | 6xΦ25.4mm, 6xΦ30mm, 6xΦ32mm, 6xΦ40mm, 6xΦ50mm, or other customized |
| 6 | Specimen holder & levelling plate–Tear drop |  | 9xΦ25.4mm, 9xΦ32mm, 6xΦ40mm, 6xΦ50mm, or other customized |
| 7 | Leveling base |  | Φ180mm or Φ200mm |

## Optional Accessories:

| | | | |
|---|---|---|---|
| 8 | Universal fixture |  | Φ160mm |
| 9 | Irregular fixture |  | |
| 10 | FLAT Levelling device |  | FLAT-1 |
| 11 | ADS-4 Automatic |  | 500mlx4, flow Rate :8-52ml/minute |
| 12 | ADS-8 Automatic |  | Flow Rate :8-52ml/minute |
| 13 | Air Compressor |  | 220V, 1.1 kW, Exhaust Pressure: 0.8 MPa, Capacity: 24 L |

## Purchase list:

MET-F Metallographic Grinding Foil:

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

Silicon Carbide Abrasive Paper:

| FEPA(Grit) | 8in PSA (200mm) | 10in PSA (250mm) | 12in PSA (300mm) | 8in Plain Back (200mm) | 10in Plain Back (250mm) | 12in Plain Back (300mm) | Package |
|---|---|---|---|---|---|---|---|
| 120 | 03.04.203 | 03.04.503 | 03.04.803 | 03.03.103 | 03.03.403 | 03.03.703 | 50pcs |
| 180 | 03.04.204 | 03.04.504 | 03.04.804 | 03.03.104 | 03.03.404 | 03.03.704 | 100pcs |
| 400 | 03.04.207 | 03.04.507 | 03.04.807 | 03.03.107 | 03.03.407 | 03.03.707 | 100pcs |
| 800 | 03.04.209 | 03.04.509 | 03.04.809 | 03.03.109 | 03.03.409 | 03.03.709 | 100pcs |
| 1200 | 03.04.211 | 03.04.511 | 03.04.811 | 03.03.111 | 03.03.411 | 03.03.711 | 100pcs |
| 2000 | 03.04.213 | 03.04.513 | 03.04.813 | 03.03.113 | 03.03.413 | 03.03.713 | 100pcs |
| 2500 | 03.04.214 | 03.04.514 | 03.04.814 | 03.03.114 | 03.03.414 | 03.03.714 | 100pcs |
| 2400 | 03.04.215 | 03.04.515 | 03.04.815 | 03.03.115 | 03.03.415 | 03.03.715 | 100pcs |
| 4000 | 03.04.216 | 03.04.516 | 03.04.816 | 03.03.116 | 03.03.416 | 03.03.716 | 100pcs |

Aluminum Oxide Abrasive Paper:

| FEPA(Grit) | 8in PSA (200mm) | 10in PSA (250mm) | 12in PSA (300mm) | 8in Plain Back (200mm) | 10in Plain Back (250mm) | 12in Plain Back (300mm) | Package |
|---|---|---|---|---|---|---|---|
| 60 | 03.02.401 | 03.02.500 | 03.02.801 | 03.01.101 | 03.01.401 | 03.01.701 | 50pcs |
| 120 | 03.02.403 | 03.02.503 | 03.02.803 | 03.01.103 | 03.01.403 | 03.01.703 | 100pcs |
| 180 | 03.02.404 | 03.02.504 | 03.02.804 | 03.01.104 | 03.01.404 | 03.01.704 | 100pcs |
| 240 | 03.02.404-1 | 03.02.504-1 | 03.02.804-1 | 03.01.104-1 | 03.01.404-1 | 03.01.704-1 | 100pcs |
| 320 | 03.02.405 | 03.02.505 | 03.02.805 | 03.01.105 | 03.01.405 | 03.01.705 | 100pcs |
| 400 | 03.02.406 | 03.02.506 | 03.02.806 | 03.01.106 | 03.01.406 | 03.01.706 | 100pcs |
| 800 | 03.02.408 | 03.02.508 | 03.02.808 | 03.01.108 | 03.01.408 | 03.01.708 | 100pcs |
| 1200 | 03.02.410 | 03.02.510 | 03.02.810 | 03.01.110 | 03.01.410 | 03.01.710 | 100pcs |

# Purchase list:

DiaNi Electroplated Diamond Grinding Disc:

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

DiaRe Resin-Bonded Diamond Grinding Disc:

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

POS/POH Fine Grinding Disc:

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

Polishing Cloth:

| | | 8in(200mm) | 10in(250mm) | 12in(300mm) | Package |
|---|---|---|---|---|---|
| Coarse Polishing | NL-CP White Chemical Fiber Polishing Cloth (PSA) | 05.06.610 | 05.06.620 | 05.06.630 | 10pcs |
| | GF-JP White Synthetin Silk Polishing Cloth (PSA) | 05.10.010 | 05.10.020 | 05.10.030 | 10pcs |
| Intermediate Polishing | SC-JP White Silk Polishing Cloth (PSA) | 05.05.510 | 05.05.520 | 05.05.530 | 10pcs |
| | YS-JP White Fiber Polishing Cloth (PSA) | 05.07.710 | 05.07.720 | 05.07.730 | 10pcs |
| | CS-JP Blue Synthetin Silk Polishing Cloth (PSA) | 05.12.110 | 05.12.120 | 05.12.130 | 10pcs |
| | SR-ZP Red Synthetic Fibric Polishing Cloth (PSA) | 05.02.150 | 05.02.160 | 05.02.170 | 10pcs |
| Final Polishing | ET-JP White Synthetic Velvet Polishing Cloth (PSA) | 05.03.210 | 05.03.220 | 05.03.230 | 10pcs |
| | YR-JP Brown Synthetic Rayon Polishing Cloth (PSA) | 05.04.310 | 05.04.320 | 05.04.330 | 10pcs |
| | Final Red Final Precision Polishing Cloth(PSA) | 05.13.110 | 05.13.120 | 05.13.130 | 10pcs |
| | ZN-ZP Black Polyurethane Polishing Cloth (PSA) | 05.01.110 | 05.01.120 | 05.01.130 | 10pcs |

Adapter System:

| | AD-PSA Adapter Disc | AD-Foil Adapter Disc | AD-PB Adapter Disc | Magnetic disc | Package |
|---|---|---|---|---|---|
| 8in (200mm) | 04.08.410 | 04.08.422 | 04.08.310 | 04.08.010 | 1pc |
| 10in (250mm) | 04.08.413 | 04.08.430 | 04.08.320 | 04.08.020 | 1pc |
| 12in (300mm) | 04.08.420 | 04.08.432 | 04.08.330 | 04.08.030 | 1pc |

Diamond polishing suspension and paste:

| Diamond Suspension | | Micrometer | Diamond Paste | | Diamond Spray |
|---|---|---|---|---|---|
| Monocrystalline (500ml) | Polycrystalline (500ml) | | Monocrystalline (5g) | Polycrystalline (10g) | Monocrystalline (350ml) |
| 06.01.110-1 | 06.02.210 | 0.25um | - | - | - |
| 06.01.120-1 | 06.02.220 | 0.5um | - | - | 06.03.115 |
| 06.01.130-1 | 06.02.230 | 1um | 06.10.030 (Gray) | 06.10.110 (Black) | 06.03.320 |
| - | - | 2.5um | - | - | 06.03.325 |
| 06.01.140-1 | 06.02.240 | 3um | 06.10.040 (Gray) | 06.10.130 (Black) | - |
| - | - | 3.5um | - | - | 06.03.330 |
| - | - | 5um | - | - | 06.03.335 |
| 06.01.150-1 | 06.02.250 | 6um | 06.10.050 (Gray) | 06.10.160 (Black) | - |
| 06.01.160-1 | 06.02.260 | 9um | 06.10.060 (Gray) | 06.10.190 (Black) | - |
| - | - | 10um | - | - | 06.03.340 |

## Purchase list:

Precision polishing suspension and polishing powder:

| | 0.05μm | 0.3μm | 1μm | Package |
|---|---|---|---|---|
| AO-W Alumina Polishing Suspension | 06.04.210 | 06.04.220 | 06.04.230 | 500ml |
| AO-P Alumina Polishing Powder | 06.13.011 | 06.13.021 | 06.13.031 | 500g |
| Super Alumina Polishing Suspension | 06.04.410/414 | – | – | 500ml/1.9L |
| Super Alumina Polishing Powder | 06.14.010 | 06.14.020 | – | 1LB |

Colloidal Silica Polishing Suspension:

| SO-T401 | SO-A439 | SO-A539 | Package |
|---|---|---|---|
| 06.05.310 | 06.07.310 | 06.07.522 | 500ml |
| 06.05.320 | 06.07.320 | 06.07.520 | 1000ml |
| 06.05.350 | 06.07.322 | 06.07.524 | 1.9L |

Polishing lubricants:

| PL-W Polishing Lubricant | PL-WB Water-free Blue Low-viscosity Polishing Lubricant | Package |
|---|---|---|
| – | 06.09.640 | 500ml |
| 06.09.510 | 06.09.650 | 1000ml |
| 06.09.520 | 06.09.630 | 5000ml |

TROJAN
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