

# *Alpha-212B*

## *Manual Grinder and Polisher*

GRINDING/POLISHING



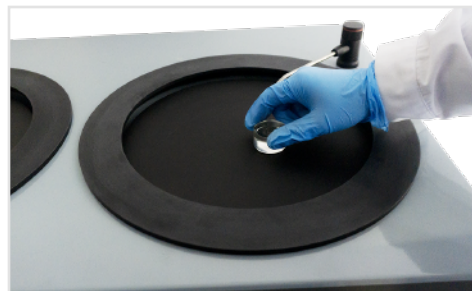
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# Alpha-212B Manual Grinder and Polisher

Alpha-212B is a newly designed grinding and polishing machine that have individual control panel on double wheels with 10"/12"(254/305mm) disc. The machine is easy to operate and stable in performance, especially suitable for grinding and polishing large-sized samples.

## Features:

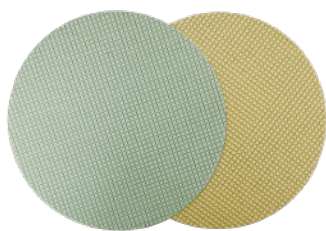
- ◆ 750W servo motor to maintain high torque output even at speeds as low as 50RPM;
- ◆ Stainless steel body, aluminum base, large diameter outlet pipe, avoid rust and water clogging troubles;
- ◆ Simple panel, easy to operate and use;
- ◆ Double fans, automatic temperature-sensing cooling system, protect the motor from overload and prolong the life of the motor.



## Technical Data:

| Model                 |                          | Alpha-212B                 |
|-----------------------|--------------------------|----------------------------|
| Working wheel         | Wheel                    | Double wheels              |
|                       | Max. dia.                | 12"(305mm)                 |
|                       | Speed                    | 0-600rpm                   |
|                       | Direction                | CW/CCW                     |
|                       | Torque                   | 10N·m                      |
| Electronic            | Voltage/Frequency        | 220V/50Hz (1Ph/N/PE)       |
|                       | Rated Power              | 1500W                      |
|                       | Rated Current            | 8A                         |
| Water Supply          | Max. pressure            | <0.3MPa                    |
|                       | Pipe dia. on inlet       | OD=Φ8mm                    |
|                       | Pipe dia. on outlet      | Φ32mm                      |
|                       | Recirculating water tank | Optional                   |
| Noisy                 | Measured at 1 meter      | <40dB                      |
| Operating Environment | Tempersture              | -20°C - 60°C (-4°F -140°F) |
|                       | Humidity                 | 0-95%RH                    |
| Dimension             | WxDxH                    | 860×662×279mm              |
| Weight                |                          | 56kg                       |

## Related Consumables & Accessories:



DiaRe Diamond Disc



Abrasive Paper



Polishing Cloth



Diamond Suspension



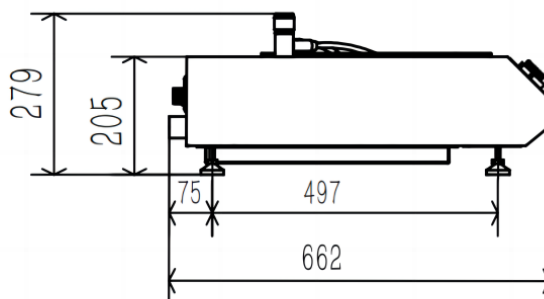
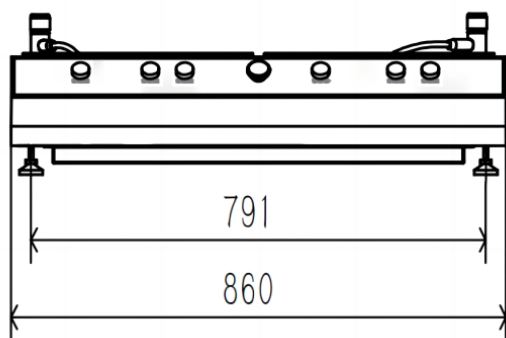
Alumina/Silica Suspension



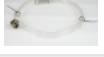
Adapter Plate System

## Dimension Figure

Unite: mm



## Standard Accessories:

|    |                 |                                                                                    |                                                               |        |
|----|-----------------|------------------------------------------------------------------------------------|---------------------------------------------------------------|--------|
| 1  | Working wheel   |   | 12" (305mm)                                                   | 2pcs   |
| 2  | Baffle          |   | Plastic baffle                                                | 2pcs   |
| 3  | Circlip         |   | 12" (305mm)                                                   | 2pcs   |
| 4  | Inlet pipe      |   | Φ8PU pipe+ Connector with G 3/4 threaded                      | 1pc    |
| 5  | Outlet pipe     |   | Drain Hose (ID=Φ32mm) and hose clamp                          | 1pc    |
| 6  | Abrasive paper  |   | 180#(300mm),400#(300mm),800#(300mm),1200#(300mm),2500#(300mm) | 10each |
| 7  | Magnetic disk   |   | Magnetic disk (300mm)                                         | 1pc    |
| 8  | Adapter system  |   | AD-PB (300mm)                                                 | 1pc    |
| 9  | Polishing cloth |   | ET-JP (300mm)<br>YS-JP (300mm)                                | 1each  |
| 10 | Power cord      |  | 1.5m                                                          | 1pc    |

## Optional Accessories:

|   |                |                                                                                     |                                     |
|---|----------------|-------------------------------------------------------------------------------------|-------------------------------------|
| 1 | Dropper        |  | Capacity: 1000ml, Flow: 14~42ml/min |
| 2 | Working wheel  |  | 10" (254mm)                         |
| 3 | Circlip        |  | 10" (254mm)                         |
| 4 | Magnetic disk  |  | Magnetic disk (250mm)               |
| 5 | Adapter system |  | AD-PB (250mm)                       |

## 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  |

## Purchase list:

### 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  |

### 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   |

## Purchase list:

### 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               |

### Precision polishing suspension and polishing powder:

|                                    | 0.05um        | 0.3um     | 1um       | 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  |



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