



Metallographic Instrument

Grinder Polisher Machine





Features:

- New and beautiful appearance, ABS material integral forming.
- It adopts high definition LCD touch screen, clear to display and easy to use.
- DC brushless motor, used for a long time; super mute design brings a good experience.
- The grinding disc is made of stainless steel, firm and steady.
- Strong large support chassis design ensures the precision rotary balance.
- Spindle leak-proof design ensures the bearing without damage.
- The size of the disc is larger than the same products in the market, can select 300mm or 250mm grinding disc, adapted to various materials preparation of test samples.
- Grinding disc stepless speed or four speed control, clockwise or anticlockwise rotating direction, which makes the sample smooth and clean.
- With magnetic grinding disc design, it supports for fast disc replacing system, the plate is Teflon painted which makes no residue of changing polishing cloth.
- Equipped with the automatic grinding head, it replaces the manual grinding and polishing. And it can set time and rotating speed of grinding head, with lighting system, it improves the grinding and polishing quality and efficiency of samples.
- It can store ten kinds of grinding and polishing procedure, set different parameters for different samples.
- With optional ZDD-1 automatic dropping device, it can set time and drop uniformly for the suspension.



Product structure diagram

(SYMPZ-200 Automatic Metallographic Grinding and Polishing Machine)



Technical Specification:

| | |
|-------------------------|----------------------------------------------------------------------|
| Model | SGPM2-300 |
| Disc Diameter | 300mm |
| Abrasive Paper Diameter | 300mm |
| Speed | Stepless speed 100~1400r/min, or Four speed 300, 600, 900, 1400r/min |
| Rotational Direction | Clockwise or Counterclockwise |
| Electromotor Power | 550W |
| Control and Display | Film key operation , Nixie tube display, With dust collecting device |
| Power Supply | 220V, 50Hz, 10A |
| Dimensions | 820×440×940mm |
| Net Weight | 122kg |

Upgrade the magnetic suction chassis, bid farewell to the clamp and pressure ring, and improve the working efficiency

Automatic tooth sampling reduces the uncertainty of the results caused by manual sample preparation and is more stable. Easy to control, more reproducible sample preparation.

Multi sample holder

The fixture can be removed as a whole, and 6 samples can be polished at the same time, which is very convenient.



1. Speed regulation of frequency converter

The rotation speed of the grinding and polishing machine can be changed between 50-1000r/min.

2. Stable rotation

It has the characteristics of compact structure and low noise.

3. Grinding disc

Fix the abrasive paper, flannelette and other consumables on it, and polish the sample.

4. Wide application

Suitable for metal, rubber, plastic, composite materials, hard alloy, mineral, fiber reinforced materials, biological materials (teeth, bone).

Accessory standard:

| Name | Specification | Qty |
|--------------------------|---------------|--------|
| Machine Body | | 1 set |
| Grinding Disc | 300mm | 2 pcs |
| Abrasive Paper | 300mm | 2 pcs |
| Inner Hexagon Spanner | 5mm | 1 pc |
| Usage Instruction Manual | | 1 copy |

First. Unpacking

1.This machine is fixed on the bottom plate in case of the damage during the transportation. First cut off the iron belt and screw off the bottom edge screws with the cross screwdriver, pull out the case there will be the machine and the bottom plate, and then screw off the M10 bolt under the bottom plate with the spanner. Place the machine on the stable table.

2.Take out the grinding head by the same method above.

Second. Working Condition

1.The work table should be stable and higher than the drainage. The table size should be larger than 1.2×0.8M and the suggest height is 0.8M.

2.The power cable is about 1 meter long. Power supply should accord with general factory electricity use, 220V, 50Hz.

3.The water supply should be clean and free of impurities, water pressure is between 0.3-0.4MPa.

4.Air source should be no corrosive gas or other chemical components and larger than 0.7mPa. If the gas contains a large amount of condensed water, will cause the product adverse action phenomenon, should set the condenser, air dryer and a condensed water collector and other facilities. This product is equipped with a 5um air filter, adjust the valve to 0.55MPa before using.

Third. Installation

1.Installation of the touch screen

The touch screen is stored separately during transportation and needs to be installed before the use of the machine.

(1) Install the frame and the screen;

(2) Connect the aviation plug;

(3) Rotate the touch screen to the appropriate position.

2.Installation of the grinding head

Take out the grinding head which is packed in the other box in case of damage during transportation. It needs to be installed before the use of the machine.

- (1) Place the grinding head into the vertical shaft;
- (2) Connect the cables to the grinding head and the machine body;
- (3) Install the air filter and connect to the air compressor, connect “in” to air, “out” to the machine;
- (4) Fasten the bolts on the grinding head (Besides disassembly and movement, don't unlock the bolts), this procedure can be done after turning on the machine to rise up the grinding head or after removing the two holes of the cover at the back of the grinding head;
- (5) The rotating of the grinding head has limits, for the first installation of the grinding head, please fasten the bolts slightly and raise up the head, manually rotate the grinding head left and right to confirm the limits, ensure that the grinding head could rotate freely above the disc, and then fasten the locking bolts. Rotate the grinding head left and right to make the limit appropriate position and then fasten the locking bolts.

3. Installation of the water inlet and outlet pipe, power cable and air pipe

- (1) Pay attention to assemble the water inlet filter screen before installing the water inlet pipe. The machine can run normally under 6 bar water pressure. When the machine is not in use, please close the external water source.
- (2) Connect one end of the drain pipe to the machine, and the other end to the sewage processor or sewer pipeline. The outlet pipe should prevent pipe blocked if there is bending, and the outlet end should be lower than the end of machine.
- (3) There is an automatic pressure regulating device in the machine, and the external gas pressure must be more than 0.5MPa. The inlet and outlet air cannot be connected reversely, and the pressure of the filter pressure valve behind the machine is adjusted to 0.55MPa. When the machine is not in use, please close the gas source.

4. Installation of the grinding disc

(1) Adjust the grinding head to the other side in case of collision.

(2) Remove the cover and the water retaining ring.

(3) Put on the grinding disc, and aim the three pins to the hole of the disc. (The grinding disc has been installed before leaving the factory, and the magnetic disc has been pasted on the grinding disc.)

(4) Attach the abrasive paper or polishing cloth on the metal plate, and then put the plate on the magnetic disc.

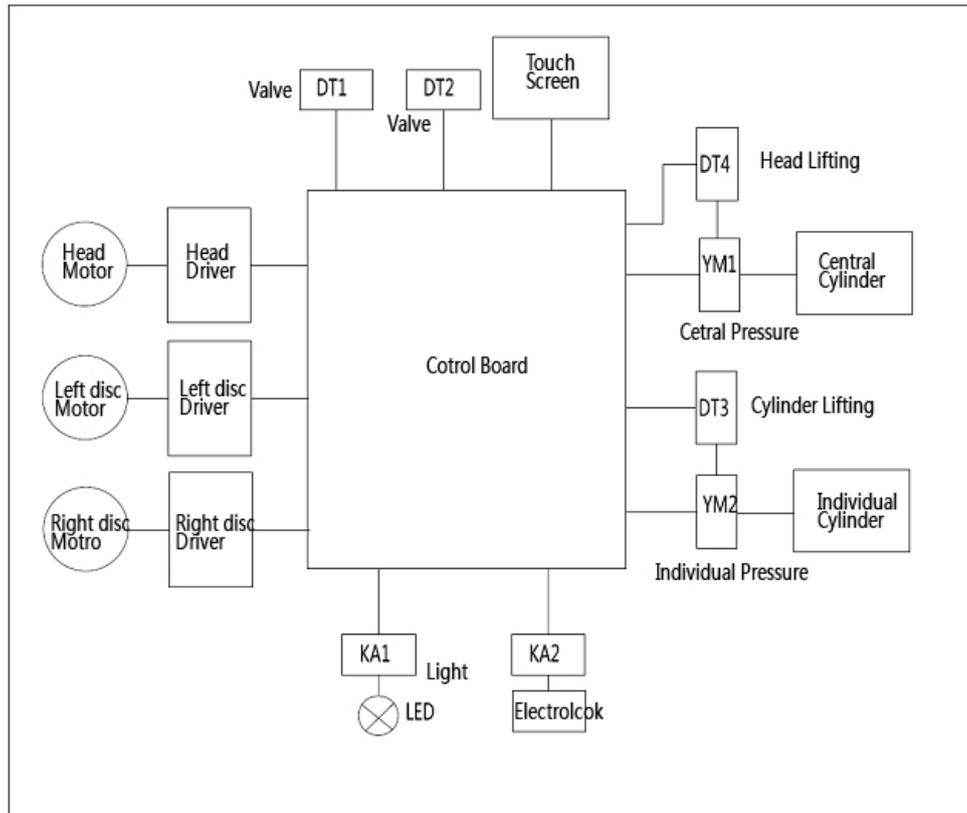
(5) Put back the water retaining ring and rotate back the grinding head.



Usage Instruction:

1. Turn on the power supply and emergency stop button, confirm that the water inlet and air inlet are normal, and press the screen to enter the main interface.
2. Make sure that the sandpaper or polishing cloth has been pasted and placed on the grinding disc, and then start placing the sample.
3. After placing the sample, set the required parameters such as pressure, rotating speed and timing time on the screen, adjust the water valve to the half open position, and press START. In the state of Cylinder Down, the individual pressure is effective, and in the state of Cylinder Up, the central pressure is effective. The corresponding settings are made according to the grinding and polishing requirements.
4. After the timing, take out the sample reversely according to the above method. After the equipment is used, pay attention to descend the grinding head, and then close the water valve, external water source, air source and power supply.

Electricity principle diagram:



Maintenance

1. After use, the machine shall be cleaned and maintained in time every day. The sample holder shall be cleaned to avoid affecting the grinding and polishing quality, and the deposited dirt in the bowl and drainage pipe shall be removed to facilitate the smooth drainage.
2. The plastic cover shall be covered in time to prevent sundries from leaking into the disc and affecting the grinding and polishing quality in the future.
3. Remove sundries or garbage on the water inlet filter screen every week to ensure normal water inflow.
4. After use, the water tap can be opened to clean the grinding disc with a brush. In particular, the magnetic disc must be kept clean to prevent magnetic degradation and insufficient suction.
5. The configured air filter shall be regularly checked for residual water and drained in time.