

BULUPOL-1C
METALLOGRAPHIC SPECIMEN
GRINDING & POLISHING MACHINE



OPERATION MANUAL

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Important cautions and safety notice

1. Following safety notices must be followed in case of fire hazard, electric shock and personnel injury
2. Read all the operation regulations
3. Keep the operation rules of electric appliances in mind
4. Follow all the warnings and regulations marked on the product and described in the documents delivered with the product
5. If there is any controversy between operation regulations and safety notice, the safety notice shall prevail, in case that the problems couldn't be solved by yourself, please consult the sale company or competent service departments
6. Pull out power plug before cleaning the machine. Clean the machine with wet cloth other than kerosene or other detergents.
7. Don't place the machine on an unstable table, or it may be damaged in case of falling down.
8. Forbid any subject to be placed on the power source and the polisher.
9. Overload of power socket on the wall may lead to fire hazard or electric shock
10. Never try to disassemble the polisher in case of electric shock. The polisher can't be disassembled except for qualified technicians. You may expose yourself in a danger of electric shock or other similar danger to open or remove the cover. Improper reassembly may also result in later electric shock
11. Should the following cases happen, pull out electric plug and consult to professional maintenance personnel.
12. The power cord, plug or cable is damaged or broken
13. The machine fails to run under proper operation
14. The polisher falls down or the shell happens to be damaged.
15. Obvious change is found on the capability.
16. Only permit adjusting the mentioned parts in the manual
17. Keep this manual in file.

1 Applications and features

This grinder polisher is of single disc. It is suitable for pre-grinding, grinding and polishing metallographic specimens. Since the machine is speed-adjusted by a transducer, it can get rotating speed of 50-1000rpm, which favors the machine with wide applications. The machine is equipped with cooling system which can cool down the specimen during primary grinding so as to prevent overheating and damage the metallographic structure. Featuring easy operation and reliable performance, it is an indispensable device for the factories, research institutions and college labs to prepare metallographic specimen.

2 Main Technical Parameters

1. Working voltage: Single phase, 220V, 50Hz
2. Diameter of grinding disc: $\phi 200\text{mm}$
Rotating speed: 50-1000rpm
3. Diameter of polishing disc: $\phi 203\text{mm}$
Rotating speed: 50-1000rpm
4. Motor: YSS7124, 550W
5. Overall dimensions: 800*440*360mm
6. Weight: 41 kg

3 Installation

Open the wooden package of the machine.

Place the machine on a stable platform free of other objects, make sure the machine is placed stably and in horizontal position.

Connect the water inlet and outlet pipe at the rear side of the machine

Connect the grounding cable

Knock the seating shoes of the grinding and polishing disc with a rubber hammer along the axial direction until the grinding and polishing disc are unable to move.

Turn power on and check whether the machine runs normally.

After the above check, the machine is ready for operation.

4 Description of Structure

1. This polisher is composed of the base, grinding & polishing disc, and control panel. It is covered with nice glass fiber shell, which features beautiful appearance, corrosion prevention and rustles characters.

The motor is fixed on the machine shell. The shaft is driven by a V-belt, the discs are fitted through the shaft and can rotate by key –drive. The switch is fitted on the machine body, waterproof abrasive paper is adhered on the discs. The handle on removable water valve can control the water flow, the wastewater can be discharged through outlet pipe.

Note: Since it is of conical joint between the discs and transmission shaft, during the installation, knock the seating shoes of the grinding and polishing discs with a rubber hammer along axial direction until they fit tightly. Otherwise, they will affect the performance of the machine.

5 How to operate the control panel

A: Display screen: Turn power on, the displayer indicates the default speed “499”, when running, it indicates the present rotation speed.

B: RUN key: press RUN key; the motor starts to run.

C: STOP/RESET key: During normal running, press STOP/RESET key, the motor will stop running.

D: UP and DOWN key: Press UP or DOWN key to get required revolution. Press UP key, the rotation speed will rise. Press DOWN key, the rotation speed will slow down.

6 Method 1: Grinding

Adhere or clamp the waterproof abrasive paper on the disc.

Turn on water switch and regulate the water flow.

Turn on the power. The displayer indicates “499”, which means that the machine is power-on and ready for operation.

Press the RUN key on the control panel. The machine will automatically speed up to target rotation 499rpm (how to set target rotation, please refer to the instruction manual of transducer)

Press UP or DOWN key to setup required rotating speed for grinding process between 50rpm and 1000rpm.

Hold tightly the cut specimen and approach to the abrasive paper lightly. Wait until the specimen and abrasive paper have a good contact without jumpiness, press the specimen and start grinding.

The force applied should reach the extent that the metallographic structure of the surface will not be burnt due to overheat by friction (about 2kgf).

At the end of operation, press STOP/RESET key. The motor will stop running, turn power switch leftward to turn off the power.

7 Method 2: Polishing

Place the polishing textile with contact adhesive on the polishing disc

Press the clamping ring onto the outside diameter of polishing disc so as to fix the polishing textile without contact adhesive.

Paint polishing agent onto the textile

Turn on the power. The displayer indicates “499”, which means that the machine is power –on and ready for operation

Press the RUN key on the control panel. The machine will automatically speed up to target revolution 499rpm (how to set target rotate speed, please refer to eh instruction manual of transducer).

Press UP or DOWN key to setup required rotate speed for polishing process between 50rpm and 1000rpm.

Hold tightly the specimen already grinded and approach to the polishing disc lightly. At first press the specimen against the center of polishing disc then move outwards while polishing.

Should the textile be too adhesive, dilute the polishing agent

Should the textile be worn, replace it in time to prevent the specimen from damage

At the end of operation, press STOP/RESET key. The motor will stop running, turn power switch leftward to turn off the power

When polishing, it is recommended to work under 500-800rpm rotate speed.

8 Cautions

The machine must be well grounded

Water inlet and outlet pipe are in good condition and free of leakage

At end of each operation, clean up the machine

Should abnormal sound be heard, stop running and check it at once.