

## KWUP-250 Ultrasonic Die Polishing Machinery



Kingway<sup>TM</sup>  
Technology Nature Human

### I. Brief introduction

KWUP-250 Ultrasonic Die Polishing Machinery is used to repair and re-polish the diamond and polycrystalline diamond dies ranging from 0.3mm to 8.0mm.

Main improvement: rotary platform automatic swing device; transistor generator to improve the power output; improve the ultrasonic energy converter design; direct air cooling, and adopt magnetic suspension to regulate the pressure, so improve the production environment.

### II. Technical parameters:

1. Power supply: 220V, 50±2Hz

2. Operating frequency: about 20KHz
3. Power consumption:  $\leq 500W$
4. Energy converter: piezoelectric wafer, air cooling
5. Way of pressure: adopt magnetic suspension or spring to add or regulate the pressure
6. Rotating speed: about 123 r/min
7. Swing speed: about 30 swing/min
8. Pivot angle:  $\geq 12^\circ$ , adjustable

### III. Working principle and device structure

1. Use the high speed ultrasonic wave vibration, by means of steel pin and grinding material, impact is produced on the processed surface, the processed surface is grinded until up to the desirable shape and size.

2. The device is composed of ultrasonic wave generator, energy converter and base.

#### (1) Ultrasonic generator

Ultrasonic wave generator is built in a small chassis, serves as an ultrasonic power supply, uses frequency automatic leap circuit, can reach the optimal ultrasonic output and vibration.

#### (2) Energy converter

Energy converter is a highly-efficient electroceramic energy converter, which can convert the ultrasonic wave to smooth ultrasonic vibration, air cooling.

#### (3) Base

There is a rotatable and swinging die base. It is installed onto the cross shaped board, can move up and down freely by means of magnetic suspension and counterweight pressure. The cross shaped board can align to the center freely. On the pillar behind it, there is a board which can move up and down. And the energy converter is installed onto this board.

### IV. Instruction on how to install and use

#### 1. How to install

Place the base on a smooth table, move the energy converter up and down until to a proper position and lock. Connect the energy converter with generator using the output circuit configured along the machine. Plug the Power Plug of the base into the outlet of the ultrasonic generator. Make sure no deflection after checking, and plug the Power Plug of the ultrasonic generator into the outlet with reliable grounding when all the switches are off.

#### 2. How to use

According to the size of the processed dies, choose a proper amplitude transformer and steel pin. Weld firm the steel pin onto the amplitude transformer. Grind a proper angle with a grinding wheel, install onto the energy converter and screw down. Place the die on the die base, adjust the cross shaped board and the converter board, allowing the steel pin insert the die hole, adjust the counterweight pressure of magnetic suspension, put in the grinding material, turn on the ultrasonic machine and die base rotating switch. If necessary, turn on the swinging switch of die base. Adjust the output power of ultrasonic wave until appropriate. Then you can see the grinding material agitate with the help of ultrasonic wave. The die is under processing.

Note: when necessary, fine-adjust the frequency to optimal output.

### V. Equipment Assembly List and Accessories:

KWUP-250 Ultrasonic Die Polishing Machinery	1 set
Specification brochure	1 pcs

Accessories	
Amplitude transformer	2 pcs
(14—17) Open end wrench for amplitude transformer connection	1 pcs
(M10×25) Joint bolt	2 pcs
Drive belt	1 pcs
Connection wire	1 pcs
Power supply wire	1 pcs

**Manufacturer:**

**Tianchang Kingway Diamond Dies Factory**

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