

# *MJ Machinery & Diamond Tools*

Unit 207 – 12 Pioneer Avenue Tuggerah New South Wales 2259 Australia

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## Blade Grinding Machines



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## MF2513C Blade Grinding Machine



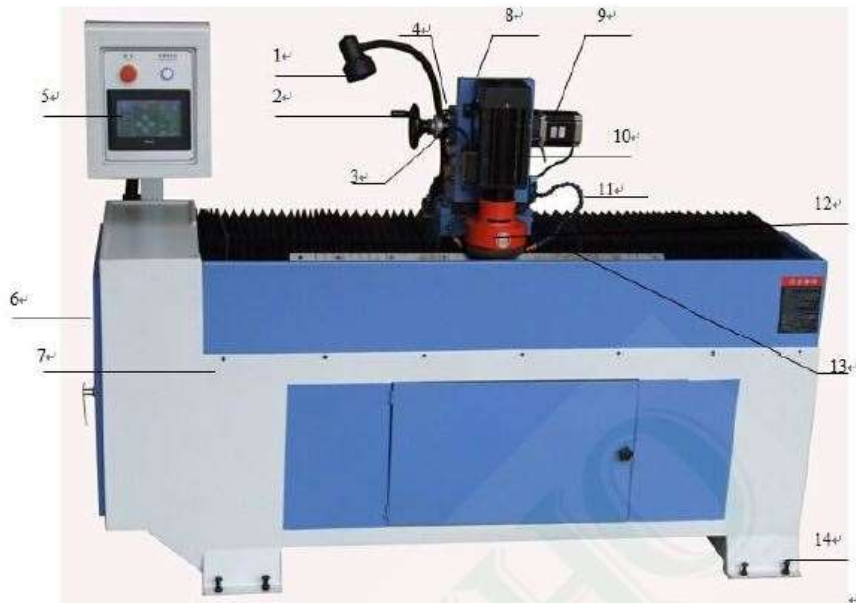
- 1 Turn Magnetic On - Magnetic must be turned on before grinding wheel.
- 2 Turn Grinding Wheel On.
- 3 Turn on Tool Settings.
- 4 Move grinding wheel ( R or L ) over the knife.  
Lower the head down to the knife by the down button or wheel.  
Touch the blade back of a fraction.
- 5 Check grinding sequence.
  - 1)removal per stroke
  - 2)Head speed
  - 3)Rough - Spark outINPUT
- 6 Press Start button

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## **I. Machine Appearance**



- |                       |                         |                               |
|-----------------------|-------------------------|-------------------------------|
| 1、 Work light         | 6、 Electricity Box      | 11、 Cooling Pipe              |
| 2、 Lifting Hand Wheel | 7、 Machine Cabinet      | 12、 Grinding Wheel Shield     |
| 3、 Lifting Index Ring | 8、 Lifting Planker      | 13、 Electromagnetic Chuck     |
| 4、 Oil Pump           | 9、 Servo Feed Motor     | 14、 Leveling Regulating Screw |
| 5、 Operation Screen   | 10、 Grinding Head Motor |                               |

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## **II. Main Application**

The machine is applicable in grinding all kinds of straight blade cutters like woodworking planer cutter, rotary cutter, shearing cutter, ink scraper, scudding knife and crushing cutter etc from industries like furniture, timber processing, printing and textile etc. Consisted of 7 parts including lathe bed, workbench, slide carriage, grinding head, automatic cutting feed, electricity and cooling, the machine is reasonably structured and rationally designed with elegant appearance. The machine track adopts imported linear guide rail to ensure rotate angle from 0° to 90° of the workbench. The cutter is clamped by electromagnetic chuck to ensure safety and reliable operation. The grinding head adopt grinding head motor and cutting feed adopt frequency converter to adjust the speed from 0-60Hz at constant velocity. The grinding cutter feed is servo controlled according to practical situation to set the automatic feeding speed and amount. As the core controlling data, the PLC electronic control system processes all the information on the LCD which highly ensures the grinding quality. Before using this machine, please read the following instructions and operations carefully.

## **III. Main Technical Parameter:**

Max. Grinding Length: 1000mm	Main Motor Power: 3kw
Grinding Effective Length: 1000mm	Electromagnetic Chuck Spec: 140X1000
Feeding Motor Power: 60W	Knife Rest Adjustable Angle: 0-90°
Grinding Wheel Spec: 150x32x55mm	Water Pump Power: 40W

## **IV. Preparation**

- 1、Place the machine on smooth ground and connect it to correct power voltage with favorable ground connection performance.
  - 2、Clean the track and lubricate it.
  - 3、Check the grinding wheel clamp plate and make sure it's locked without obvious deflection and vibration.
  - 4、After power switched on, check the feeding direction and the grinding wheel motor.
  - 5、Adjust the position of regulating handle according to the cutter length.
-

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## **V. Adjustment & Use**

1. Adjust the distance of set piece according to the length of the cutter. The cutter back must be tightly cling to the set piece before installment, then activate electromagnetic button.
2. Designed with knife rest angle adjusting device, the machine is applicable in grinding cutter blade with different angle. The adjusting handle on the knife rest could be adjusted to the angle from 0° to 0-90° after loosen the anchor screw on both ends.
3. The stroke adjusting handle on the slide bar of the machine can be adjusted to proper position when processing cutters in different length. It should be 40-50mm longer than the cutter blade.



4. The vertical cutter feeding amount is adjusted by interface machine data setting with 2 grades. Automatic cutter feeding, the system will achieve automatic grinding by servo. Manual feeding by the hand wheel, turn the hand wheel 360 °clockwise will achieve 2mm cutter feed, anticlockwise to achieve retract. (Note: Small mount of feeding at the beginning and the end is required to avoid crushing between grinding wheel and cutter blade)
5. The cutter loading amount should be from 0.05 to 0.30mm. Any overload might cause cutter blade burning off and black coating etc which greatly affect the grinding quality.

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6. Keep the track clean when grinding cutters. Stable operation and little noise is normal when the machine running. If anything unusual happens, shut down the machine immediately and check the feeding process. Overloading of cutter and mismatching of grinding wheel may cause problems. Plus, check the cooling water switch and make sure it's on.
7. The track which adopts high precision materials need to be fueled before shift. (The machine is not designed with automatic bowser)
8. Cutter should be loaded to the lower end with its blade in the right position.

## **VI. Precautions**

1. Refuel the track before every shift to maintain grinding precision and clean the track and knife rest after every shift. Make sure the track and electromagnetic is in clean situation.
2. Amend the arris of the grinding wheel regularly with diamond stylus to avoid abrasion quality problem. Pay attention to the abrasion of the grinding wheel and renew it when necessary.
3. No lubrication and cleaning is allowed when the machine is running.
4. Frequently check the temperature of the motor and bearings and make sure its below 60°.
5. The parameters of the frequency converter are set before delivery. No arbitrary altering is allowed unless in special needs.
6. The provided shield should be put into use to ensure safety of the machine and operator.
7. Those who are not familiar with the machine structure and performance are not allowed to operate it in case any maloperation or damage happens.



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## Specifications for Knife Grinding Machine

shows the main technical features of the knife grinding machine. Additional information is available from your engineers

Product Name	Straight knife blade sharpening machine
Model	MF2510B
Grinding wheel dimension:	205*115*145mm
Cutter rest adjustable angle:	0-90°
Wheel horizontal moving speed	0-60Hz
Wheel head rotation speed	1440r/min
Main electric motor power	2.2kw
Feeding electric motor power	0.75kw
Water pump power	90w
Working table size	1000*200mm
Overall size	2200*1100*1650mm
N/W	800kg