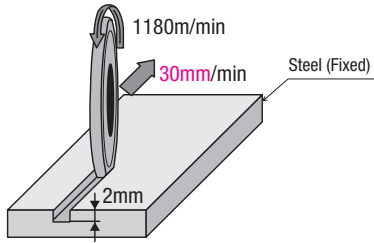


Diamond & CBN Wheel Truing/Dressing Methods

For appropriate use of diamond and CBN wheels, when resetting the wheel to the machine immediately after purchase, or when the wheel surface has become deformed, carry out truing and dressing.

Truing and Dressing Types

1. Steel grinding methods



Mark the wheel outer surface with a magic marker etc., and grind raw material such as S45C normally until the entire surface is in contact (the mark is concealed) and there is no more center runout. Dressing is completed along with truing, allowing the actual work to begin.

- Rotation speed should be 1180 m/min, slightly slower than normal. (Reference: normally 1700 ~ 2000 m/min or so)
- When the rotation speed cannot be reduced, decrease the cutting depth to 1 mm or so.
- Feed should be 30 mm/min (30 millimeters per minute) at an almost stationary speed.

2. Grinding a WA or GC grindstone (for flat grinding surface)

Fix a WA or GC (or C) grindstone in a vise and grind it as with a workpiece.

- ⚠ WA is effective for dressing.
- ⚠ GC is effective for truing.
- ⚠ Particle size for the stick grindstone should be approximately the same as that of the grinding wheel.

(1) Wheel Rotation Speed

500 ~ 1000 min⁻¹ or 200 ~ 500 m/min⁻¹ is optimal, and normal work rotation speed is also possible.

(2) Cutting Depth

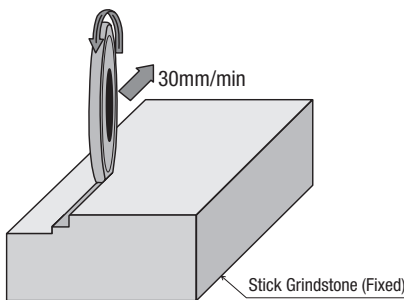
- For coarse particle size (coarse grinding) wheel
 - 0.200 ~ 0.500 mm/pass at #140 ~ #170
 - 0.050 ~ 0.200 mm/pass at #200 ~ #230
 - 0.050 mm/pass or less at #270 ~ #325
- For fine particle size (finish grinding) wheel
 - 0.020 ~ 0.005 mm/pass at #400
 - 0.005 ~ 0.002 mm/pass at #600
 - 0.002 mm/pass or less at #800

(3) Table motion

Cut and begin forward/back feed only, adjusting feed speed by particle size.

The feed speed should be slower for finer particle size.

⚠ Do not move left or right



(4) Grinding fluid

Used wet; stick grindstones should be soaked in grinding fluid before use.

As well, for extended work, apply grinding fluid with a dropper during work to prevent drying.

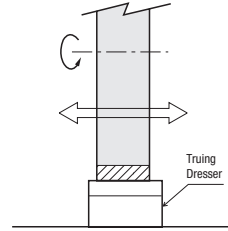
As a guideline, the wheel should be sticky enough with oil that the grindstone swarf clings to it.

(5) Precautions

Overdoing truing and dressing may lead to wear.

⚠ This is more pronounced with finer abrasive grain.

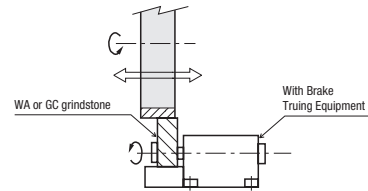
3. Using Truing and Dressing



Carry out truing (reflection removing, molding) with the dresser as in the above figure. Wheel sharpness suffers when the truing dresser is used, meaning dressing is required. Take care, however, as cutting beyond reasonable limits will lead to damage to the wheel.

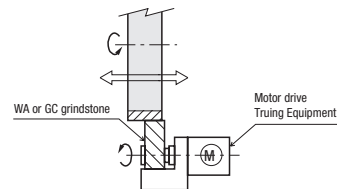
⚠ Effective for truing of CBN wheels.

4. Using Truing Equipment with Brake



As in the figure, this equipment uses the rotation force of the wheel to rotate the WA or GC grindstone, carrying out truing and dressing through the speed difference between the wheel and the grindstone. Efficient work is possible, but take care as if the grindstone is not properly rotated it may damage the machine.

5. Using Motor-Driven Truing Equipment



This equipment uses motor drive to rotate the WA or GC grindstone, truing and dressing the wheel. It produces the stablest wheel surface, fast work, and safety.

Manual Tools

Electric Tools

Pneumatic Tools

Cutting Products

Grinding/Polishing Products

Welding Products

Measurement Tools/Measurement Devices

Machine Tools

Electro-Discharge Products

Chemicals

Adhesive

Filler

Antistatic Products