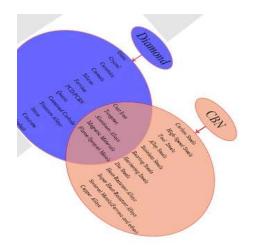
# **Grinding Wheel Safety Standards and Precautions**



Xinxiang New Zuan Diamond Tools Co., Ltd.

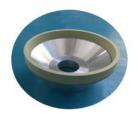


**Provide Diamond & CBN Grinding Wheels** 

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Metal Bonded Grinding Wheels

Resin Bonded Grinding Wheels

Vitrified Bonded Grinding Wheels

Electroplated Grinding Wheels

- Metal Bonded
   Wheels have High
   efficiency,good self sharpening ,high
   stock removal,
   stong hold and
   good abrasion
   resistance
- Resin bonded wheels have good selfsharpening ,sharp cutting ,high efficiency,low roughness of workpiece surface
- Vitrified boned wheels have sharp cutting ,high efficiency ,long life,less heat and jam generated in grinding, easy control of the precision and easy dressing
- Electroplated
  Wheels have high
  grain density, sharp
  grinding ,high
  efficiency ,good
  precision, without
  dressing

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## Transportation of grinding wheel:

All grinding wheels are relatively fragile products and should be handled with care when carrying.

#### Users should do:

- 1. Check the grinding wheel immediately once received and confirm whether the grinding wheel is not damaged or cracked during transportation.
- 2. Firmly support the grinding wheel
- 3. Carefully move the grinding wheel to the shelf.

#### Not allowed:

- 1. Wrap the grinding wheel with moisture-absorbing materials
- 2. Roll the wheel on the ground.
- 3. Lean the wheel beside the device.
- 4. Stack other workpieces and parts on the grinding wheel.

## Storage of the grinding wheel:

When storing the grinding wheel, should provide the suitable shelf for different types of products.

#### Users should do:

- 1. Provide reasonable support for all types of grinding wheels
- 2. Place the grinding wheels vertically or flat according to different sizes and shapes.
- 3. Store the grinding wheels in the dry place.

#### Not allowed:

- 1. Store the grinding wheel in the humid place.
- 2. Store the grinding wheel in the place where the temperature changes greatly.
- 3. Store the grinding wheel at the temperature of the freezing point.

# Inspection before installing the grinding wheel

Before installation, check whether the grinding wheel damages and damage conditions by visual method, and check whether the RPM of the machine tool matches that of the grinding wheel.

#### Users should do:

- 1. Visual check all grinding wheels before using. Do not use if damaged.
- 2. Sound inspection (hammering inspection): Check the sound for vitrified bond grinding wheels before using. If the grinding wheel has no cracks, it will make the crisp sound, otherwise it will make the muffled sound.

3. Check whether the RPM of the machine tool matches the highest safe speed indicated on the grinding wheel.

#### Not allowed:

- 1. Install the cracked grinding wheel on the axle.
- 2. Exceed the maximum RPM defined by the grinding wheel.

## The installation of grinding wheel:

The correct installation step of grinding wheel is very important for the safe and effective use. So, it should be ensured that the personals have the professional level in the practical operation.

#### Users should do:

- 1. The spindle of the grinding wheel should be straight, smooth and clean, and the size of the spindle should be within the tolerance range.
- 2. The grinding wheel should install on the spindle or flange.
- 3. The flange and chuck pressing surface should be clean and the out diameter is at least not less than 1/3 of that of grinding wheel.
- 4. Measure the flatness of the flange regularly. The correct flange flatness should be within 0.5mm. If the flatness is out of tolerance, need to maintain the flange.
- 5. There is a flexible material pad between the grinding wheel and the chunk pressing surface. The pressing surface should be clean and flat without any attachment.
- 6. Make the system balance adjustments for grinding systems with balance adjustment device.
- 7. For multi-point fastening flanges, fasten the flanges on the grinding wheel according to the torque recommended by the machine tool manufacturer. Pay attention to the tightness of the screws and nuts when installing, press it enough to drive the grinding wheel without sliding. According to the diagonal order, tighten the multiple screws step by step. If necessary, apply the force wrench.

#### Not allowed:

- 1. Forced install the grinding wheel on the spindle or change the hole diameter of the grinding wheel arbitrarily( if the grinding wheel hole diameter does not match the spindle, please select suitable size grinding wheel).
- 2. Use not clean, unbalanced, with burrs, different sizes, or different indentations of flanges.
- 3. Tighten the tightening screws too tightly for multi-point fastening flanges.

# Use of grinding wheel:

Even if the grinding wheel meets the requirements of all safety inspections, whether it is safe in use depends on the actual use of the grinding wheel and the correct operation method to a large extent.

#### Users should do:

- Before starting the machine tool, check whether various protection devices of the machine tool and the reset switches of various actions have been adjusted and in place
- 2. Before starting to dress and use the grinding wheel, the grinding wheel will be idling at the working speed for 1min with protective cover( at least cover half of the diameter of grinding wheel).
- 3. When grinding, the operator should wear safety glasses or other similar safety products.
- 4. When dressing or using the grinding wheel, gentle contact. If necessary, re-dress the grinding wheel.
- 5. When the grinding wheel stops rotating, first turn off the coolant to avoid the grinding wheel losing balance.
- 6. After dressing the grinding wheel, it should be ensured that the processing can be performed after the single point diamond dresser resetting.
- 7. Prevent junks such as wrenches from getting in.

#### Not allowed:

- 1. Start the machine tool before the shield is not in place
- 2. After the machine is started, the operator stands directly facing the grinding wheel.
- 3. Forcibly squeeze the workpiece into the grinding wheel, and the grinding pressure or feed rate is too large.
- 4. Forced grinding causes the machine motor to slow down the speed significantly or to burn the workpiece.
- 5. Submerge the stationary grinding wheel into the liquid.
- 6. Apply an external force to the grinding wheel and make it stop.
- 7. Continue to use undressed and surface passivated grinding wheels.
- 8. Use the grinding wheel in the operations that do not match its design, such as side grinding.