



### GRINDERS

#### Potential Hazards

1. cuts/lacerations/amputations
2. eye injury / flying objects
3. electrocution
4. respiratory illness
5. repetitive strain injury
6. noise (hearing loss)

#### Personal Protective Equipment Required

- |                 |                    |                 |
|-----------------|--------------------|-----------------|
| Hard hat        | CSA Boots          | Eye protection  |
| Hand protection | Hearing protection | Skin protection |
|                 | Face protection    | (clothing)      |

### PRELIMINARY ACTIVITIES

Where multiple trade activity is scheduled, the general contractor is to review in advance the priority of work and schedule the appropriate time frame to allow each trade to complete their scope of work. Prior to any work commencing supervisors must conduct a hazard assessment of all applicable work areas. Any hazards that are found during the hazard assessment must be addressed prior to any work commencing.

1. Wear proper personal protection such as eye and face protection, apron, gloves, safety shoes, hearing protection, etc. while grinding.
2. Check grinding wheels for cracks before mounting.
3. Use proper wheel guards on all grinding machines.
4. Barrier or enclosure systems are required to restrict access to the work area.
5. Local exhaust ventilation (LEV)—use concrete grinders with HEPA vacuum attachments.
6. Always handle and store wheels in a careful manner.
7. Visually inspect all wheels before mounting for possible damage or cracks.
8. Make sure operating speed of machine does not exceed speed marked on the wheel.
9. Check mounting flanges for equal and correct diameter (should be 1/3 diameter of the wheel and relieved around the arbor hole). Refer to ANSI B7.1 Table 14
10. Adjust proper cup guard so that it is between the operator and the wheel. Set the “skirt” guard to within 1/8 inch of the cup wheel’s rim (grinding surface). Use mounting blotters that are supplied with wheels.
11. Always use safety guard that covers a minimum of ½ the grinding wheel. Refer to ANSI B7.1
12. Allow newly mounted wheels to run at operating speed, with guard in place, for at least one minute before grinding.
13. Clamp or secure all work-pieces before grinding.
14. Grind only on a cup wheel’s rim.
15. Avoid bumping or striking the wheel onto any surface. Hard impacts can damage the wheel and cause it to break.
16. Feed the wheel into the work-piece at an even speed. Attempting to grind too fast will cause excessive strain on the wheel and may result in breakage.
17. Stop grinding and investigate any unusual sounds, vibrations, or anything that appears abnormal.
18. Keep hands and other body parts clear of the grinding wheel and spark stream.
19. Maintain your tools as if your life depends on it.
20. Replace damaged wheel guards.
21. Always handle and store grinding wheels in a careful manner.
22. Shield bystanders and any flammable materials from the spark stream (shower).
23. Follow any symbols and warnings located on the wheel.
24. Contact the manufacturer if you have any safety questions.

### DON'Ts:

1. Never adjust the machine while it is operating.
2. Never operate grinding wheels at speeds in excess of the recommended speed.
3. Do not exceed recommended depth of cut for the grinding wheel or machine.
4. Do not use a wheel that has been dropped or appears to have been damaged.
5. Do not force a wheel onto the machine or alter the size of the mounting hole – if the wheel won’t fit the machine, get one that will.
6. Do not use mounting flanges on which the bearing surfaces are not clean, flat, and smooth.
7. Do not tighten the mounting nut excessively.
8. Do not start the machine until the safety guard is properly and securely in place.



9. Do not jam work into the wheel.
10. Do not stand directly in front of grinding wheel whenever a grinder is started.
11. Do not grind material for which the wheel is not designed.
12. Do not grind without proper ventilation.
13. Do not exceed the speed marked on the cup wheel.
14. Do not use spacers, washers, or hex nuts behind cup wheels. These items may aid in the removal of the wheel, but can lead to wheel breakages.
15. Do not "hang" the wheel below the cup guard.
16. Do not use Type 27 (depressed center) or Type 28 (saucer-shaped) wheel guards with cup wheels because they are too shallow to offer full protection.
17. Do not remove the "skirt" or bottom of the cup guard.
18. Do not alter a cup wheel. If the cup wheel does not fit on the tool, then get the correct tool or wheel.
19. Do not use excessive downward pressure while grinding.
20. Do not use on any machine NOT equipped with the proper cup guard.
21. Do not grind wood or other non-approved materials with an abrasive cup wheel.
22. Do not create a fire hazard. Shield any nearby flammable materials to prevent ignition from the spark stream (shower) or from latent sparks.
23. Do not allow the wheel to "load up" with the material you are grinding.
24. Do not grind on the side of a cup wheel.
25. Do not strike the cup wheel onto the work-piece or any item as it may become damaged or break.
26. Do not use this equipment if you have not reviewed all of the safety materials and have not been properly trained in the use of the tool and wheel.

### SAFE WORK PROCEDURE

1. No worker shall operate any power tool, or similar type of equipment unless they are familiar with the use and operation of the equipment and has received specific instruction on its use and operations.
2. Always use proper guard with grinding wheel. A guard protects operator from broken wheel fragments.
3. Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over rated speed can fly apart and cause injury.
4. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
5. Keep guards in place when required.
6. Use only wheels having a maximum operating speed at least as high as "No Load RPM" marked on the tool's nameplate. When using depressed center wheels, be sure to use only fiberglass-reinforced wheels.
7. Check the wheel carefully for cracks or damage before operation. Replace cracked or damaged wheel immediately.
8. Use only flanges specified for the tool.
9. Be careful not to damage the spindle, the flange (especially the installing surface) or the lock nut. Damage to these parts could result in wheel breakage.
10. Hold the tool firmly.
11. Keep hands away from rotating parts.
12. Make sure the wheel is not contacting the work piece before the switch is turned on.