

Cincinnati Electrical Tool, Inc.

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INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS FOR BUFFING AND POLISHING MACHINES AND FOR ABRASIVE WHEEL GRINDING MACHINES

WARNING: *Improperly used machines and improperly mounted wheels can be hazardous to the user.*

INSTALLATION INSTRUCTIONS:

1. Examine the machine upon uncrating, to see that it has not been damaged in shipment.
2. The machine should be located in a clean dry atmosphere, readily accessible for inspection and ease of maintenance that will be required periodically for normal operation.
3. The machine shall be securely fastened to the floor, making certain that no undue strain or stress is applied to its structure by uneven floor mounting.
4. Make certain the electrical power supply corresponds to the nameplate connection information on the machine.
5. After proper connection of the power supply to the machine, make certain the spindle is rotating in the proper direction. For normal operation, the wheels should run down, when facing them from the operator's position.
6. On machines equipped with brakes and electrical interlocks, make certain that the system is functioning properly.
7. Mount the wheels securely between flanges. Make certain that the spindle nut is properly tightened.
8. Make certain that the wheels being mounted on this machine are recommended for use on this piece of equipment. Consult your wheel supplier for proper operating speeds. These speeds shall not be exceeded.
9. Make certain that the buffing hoods or abrasive wheel guards are securely mounted and in place, and proper connections are made to the dust collecting system.
10. When initially starting a machine after installation of new wheels, always step away from the area immediately in front of the wheel.
11. Adequate lighting, at least 30 foot candles on the work piece, should be used on each machine area.
12. If vibration exists once the machine is started, check to determine if the wheels are out of balance or out of round. If no evidence of wheel problems exists, remove the wheels from the machine and run the unit without wheels. If vibration problems still exist, consult the factory for further assistance.
13. An adequate exhaust system shall be used to remove the dust and grit from the area.

OPERATION AND OPERATOR PROTECTION:

1. The work area around the machine should be clean and uncluttered, allowing for freedom of movement by the operator. Depending upon the type and severity of the operations being performed on this machine, the operator should wear protective covering on his/her hands and over his/her clothing.
2. Safety goggles or face shields shall be worn at all times for operator eye protection.
3. Consideration should be given to the position of the operator during the operation. A comfortable position, allowing for maximum grip and control of the work piece during the operation, is recommended.
4. For normal operating procedures, the work piece is presented to the wheel at, or slightly below, the horizontal centerline of the wheel face.
5. If, for any reason, the operator must leave the machine, the operator shall turn off the power to the unit to avoid potential danger to passers-by.
6. The operator shall be trained in the proper care and use of this machine in accordance with the foregoing, American National Standards Institute's codes, OSHA regulations and the employer's safety and operating procedures.
7. The machine shall not be operated unless required hooding or guarding is in place and functioning properly.

MAINTENANCE:

1. The ball bearings used in the manufacture of this machine are designed for permanent lubrication. The bearings are lubricated at the factory, and no further lubrication is required.
2. If a belt type machine, periodically check the belt drive system to keep proper belt tension on the drive belts to avoid slippage.
3. For replacement parts, consult your parts list for identification so that they may be properly ordered from the factory.
4. Do not attempt to change speeds or any other specifications of the machine without first consulting the manufacturer. Design changes can result in unsafe operating characteristics in the machine.
5. Periodically check the motor and the motor mounting assembly for build-up of any contaminants that may occur from use. Thoroughly clean these members to prevent the possibility of overheating.
6. We recommend that a monthly inspection be made of the wheel hoods or guards and other safety covers on the machine, to make sure that fasteners are in proper working order and that all the safety covers are properly attached. Do not attempt to alter or remove any safety cover hoods or guards from the machine. The machine shall not be operated (except for routine maintenance) if hoods or guards are altered or removed.

VARIABLE SPEED MACHINES:

1. If the machine is of the variable speed type, care shall be taken in training the operator in the use of the variable speed design provisions of the machine. Proper use of the equipment at various speeds will result in the best possible finish on the work piece.
2. No attempt should ever be made to modify the design speeds of this machine, without first consulting the manufacturer.
3. Since the variable speed type machine employs the use of spring loaded variable pitch sheaves and slide members, caution must be used in maintaining proper lubrication and cleanliness of these components. Consult attachment sheets for instructions pertaining to the variable pitch sheave assembly.
4. The slide base assembly shall be lubricated periodically to allow for free movement of the system.

ABRASIVE WHEEL PRECAUTIONS:

WARNING: *Grinding wheels improperly used may cause wheel breakage and result in serious personal injury.*

1. Consult your wheel supplier for proper wheel specifications relative to the materials being ground.
2. Storage of the wheels should be in accordance with the wheel manufacturer's recommendations, ANSI B7.1-1988 and OSHA regulations.
3. Make certain that the wheels are inspected and tested prior to installation on the machine in accordance with ANSI B7.1-1988 and OSHA regulations, and that they are rated for operation at the machine speed.
4. Do not attempt to install and run any wheel that has evidence of being damaged in any way.
5. Mount the grinding wheel securely between flanges. Blotters shall be used on either side of the wheel, adjacent to the flanges. Make certain that the spindle nut is properly tightened. Further information relative to the use, care and protection of abrasive wheels can be found in American National Standards Institute Code Number ANSI B7.1-1988.
6. Make certain that the work rest is properly positioned and securely mounted at each wheel position. Also, make certain that the spark breaker at the top of the wheel guard assembly is properly positioned and securely fastened. The work rest and spark shield should always be maintained and securely fastened approximately $\frac{1}{8}$ " from the periphery of the wheel. Specification relative to these items are also found in ANSI B7.1-1988.
7. The work piece must always be rested securely on the work rest or supported in some suitable fixture so that it may be properly presented to the face of the wheel for the grinding operation.
8. Grinding on the sides of a straight wheel is not allowed. Cup wheel type machines are designed specifically for this type of a grinding operation. The grinding wheel manufacturers limit the side loading pressure applied to straight type wheels.
9. If flammable materials are to be ground, the manufacturer should be consulted relative to proper handling and dust collecting system.

UNIT DUST COLLECTORS AND COMBINATION GRINDERS/DUST COLLECTORS

Filter Bag Removal and Cleaning

The dust collector has two sills, one on each side, for supporting the bags. The bags are placed side by side on the sills and held in place by two steel channel rods placed over and parallel to the sills and secured by six set screws in brackets welded to the main frame.

To remove the bags it is only necessary to loosen the six set screws. Remove the two channel rods and with an upward pressure loosen the bags and remove them through the top section of the cabinet.

Length of service for the filter bags depends upon the type of service, care and attention given to the task of keeping the filter bags clean. With proper attention, years of service can be expected.

For cleaning the bags there is a shaker handle provided with each unit which is attached to a shaker mechanism built within the bottom of the cabinet for agitation the bags causing the abrasive particles to fall into the dust tray. The bags should be shaken at least once a day or after each intermittent use of the unit. We also furnish a long hand brush as standard equipment which should be used at least once a week to remove the fine dust from the surface of the bags. The extra efforts to keep the bags clean will result in more efficient service and longer bag life.

GRINDING WHEELS ARE SAFE USE BUT DON'T ABUSE

DO

1. **DO** always HANDLE and STORE wheels in a CAREFUL manner.
2. **DO** VISUALLY INSPECT all wheels before mounting for possible damage in transit.
3. **DO** CHECK MAXIMUM OPERATING SPEED established for wheel against machine speed.
4. **DO** CHECK MOUNTING FLANGES for equal and correct diameter. Should be at least 1/8" diameter of the wheel and relieved around hole.
5. **DO** USE MOUNTING BLOTTERS supplied with wheels.
6. **DO** be sure WORK REST is properly adjusted. Center of wheel or above; no more than 1/8" away from wheel.
7. **DO** always USE A GUARD covering at least one half of the grinding wheel.
8. **DO** allow NEWLY MOUNTED WHEELS to run at operating speed, with guard in place, for at least one minute before grinding.
9. **DO** always WEAR SAFETY GLASSES or some type of eye protection when grinding.
10. **DO** TURN OFF COOLANT before stopping wheel to avoid creating an out-of-balance condition.

DON'T

1. **DON'T** use a wheel that HAS BEEN DROPPED.
2. **DON'T** FORCE a wheel onto the machine OR ALTER the size of the mounting hole — if wheel won't fit the machine, get one that will.
3. **DON'T** ever EXCEED MAXIMUM OPERATING SPEED established for the wheel.
4. **DON'T** use mounting flanges on which the bearing surfaces are NOT CLEAN AND FLAT.
5. **DON'T** TIGHTEN the mounting nut EXCESSIVELY.
6. **DON'T** grind on the SIDE OF THE WHEEL, unless wheel is specifically designed for that purpose.
7. **DON'T** start the machine until the WHEEL GUARD is in PLACE.
8. **DON'T** JAM work into the wheel.
9. **DON'T** STAND DIRECTLY IN FRONT of a grinding wheel whenever a grinder is started.
10. **DON'T** FORCE GRINDING so that motor slows noticeably or work gets hot.
11. **DON'T** GRIND material for which the WHEEL IS NOT DESIGNED.

OSHA DUST COLLECTOR REQUIREMENTS

(See Section 1910.94 Ventilation)

Wheel Diameter	Wheel Width		Minimum Exhaust Vol. (Feet ³ /Min.)	
	Grinding	Buffing	Per Wheel Grinding	Per Wheel Buffing
Up to 9"	1 1/2	2	220	300
Over 9" to 16"	2	3	390	500
Over 16" to 19"	3	4	500	610
Over 19" to 24"	4	5	610	740
Over 24" to 30"	5	6	880	1040

Other information concerning Operation, Maintenance and Safety relative to components used, are attached to this set of Installation, Operation and Maintenance Instructions. These attachments constitute a part of the specifications of these Installation, Operation and Maintenance Instructions.