



Instruction Manual For Baldor Tool Grinders

SAFETY NOTICE:

WARNING statements describe conditions that may lead to personnel injury including potentially fatal injuries if the machine is not properly used and warnings are not properly followed.

Caution statements describe conditions that may lead to equipment damage.

Electrical shock can cause serious or fatal injury. Only qualified personnel should install, maintain or troubleshoot this equipment.

- WARNING:** Do not operate this grinder until you are sure that you are completely familiar with the safe operation of the grinder, all accessories and safety equipment. Improper use can lead to severe injury. This manual defines proper use of this equipment. Before using this equipment for any other use, please consult Baldor. Contact Baldor if you do not understand any procedure or operation concerning this grinder or this manual.
- WARNING:** Prevent electrical shock hazard and accidental machine operation. Always disconnect grinder from the power source before servicing, changing accessories (such as wheels, tool rest, spark arrestor, etc.) or before performing maintenance.
- WARNING:** Avoid accidental starting. Make sure switch is in "OFF" position before connecting to power source.
- WARNING:** Be sure the system is properly grounded before applying power. Do not apply power before you ensure that grounds are connected. Electrical shock can cause serious or fatal injury. Follow the National Electrical Code (NEC) and local codes for the safe installation of this equipment.
- WARNING:** Always use safety glasses with side shields (or full face shield) when operating grinder. Do not use ordinary eyeglasses. Also use face or dust mask if cutting operation is dusty.
- WARNING:** Unsuitable accessories or attachments added to this machine can create hazards. Baldor accessories are specifically designed to be used with this grinder. Use accessories or attachments only in the proper intended manner. Accessories or attachments obtained from another source may cause hazards. Consult the manufacturer before use.
- WARNING:** Keep guards in place and in working order. Guards are design to prevent injury. Never operate this equipment if a guard is damaged, missing or improperly installed.
- WARNING:** Remove adjusting keys and wrenches from this product after use. Check to see that keys and adjusting wrenches are removed from grinder before turning it on. Projectiles can cause severe injury to yourself or others.
- WARNING:** Keep work area clean and well lighted. Clutter and poor lighting invites accidents.
- WARNING:** Don't use in dangerous environment. Don't use grinders in damp or wet locations, or expose them to rain. Electrical shock can cause serious or fatal injury. Follow the National Electrical Code (NEC) and local codes for the safe installation of this equipment.
- WARNING:** Do not wear loose clothing, neckties, rings, bracelets, or other jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
- WARNING:** Don't over reach. Keep proper footing and balance at all times. A rotating wheel can catch an article of clothing and cause personnel injury.
- WARNING:** Secure work. Use clamps to secure the work piece when practical. It's safer than using your hand and it keeps hands away from wheel.
- WARNING:** When starting a grinder for the first time, or after installing a replacement grinding wheel, it is most important that the operator stand aside for at least one minute of rotation at full speed. This is the correct practice since grinding wheels can disintegrate if they have received damage during shipping or handling.

SAFETY NOTICE Continued

- WARNING:** Check damaged parts. Before further use of the grinder, a guard or other part that is damaged should be carefully checked to assure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- WARNING:** Never install a wheel that is damaged, such as a chip or crack on any surface. A damaged wheel can disintegrate while rotating at a high RPM or when work is placed against the wheel. This can severely harm the operator or others in the area.
- WARNING:** Use proper extension cord. Make sure your extension cord is in good condition. When using an extension cord, be sure it is rated for the voltage and current rating of your product. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct wire size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the AWG gauge number, the heavier the cord.
- WARNING:** Dust created during grinding, sawing, power sanding, drilling, and other activities may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
- WARNING:** Keep children and visitors away. Remove starter keys turn off master switches. Padlock equipment or work area when not in use.
- WARNING:** Never leave grinder running unattended. Always turn power off after use.
- Caution:** Don't force grinder. It will do the job better and safer at the feed rate for which it was designed.
- Caution:** Use right tool. Don't force tool or attachment to do a job for which it was not designed.
- Caution:** Maintain grinder with care. Keep grinder clean for best and safest performance.

Always use safety glasses with side shields (or full face shield) when operating grinder. Do not use ordinary eyeglasses. Also use face or dust mask if cutting operation is dusty.

Do not overtighten wheel mounting screws. A damaged grinding wheel can disintegrate in all directions. Overtightening wheel mounting screws can stress the grinding wheel and cause it to disintegrate during operation. Wheel mounting screws should be tightened just enough to prevent grinding wheel from slipping on shaft when grinding. Use only flanges furnished with this grinder. The flanges furnished with the grinder are designed to grip the grinding wheel without introducing excessive stresses in the wheel.

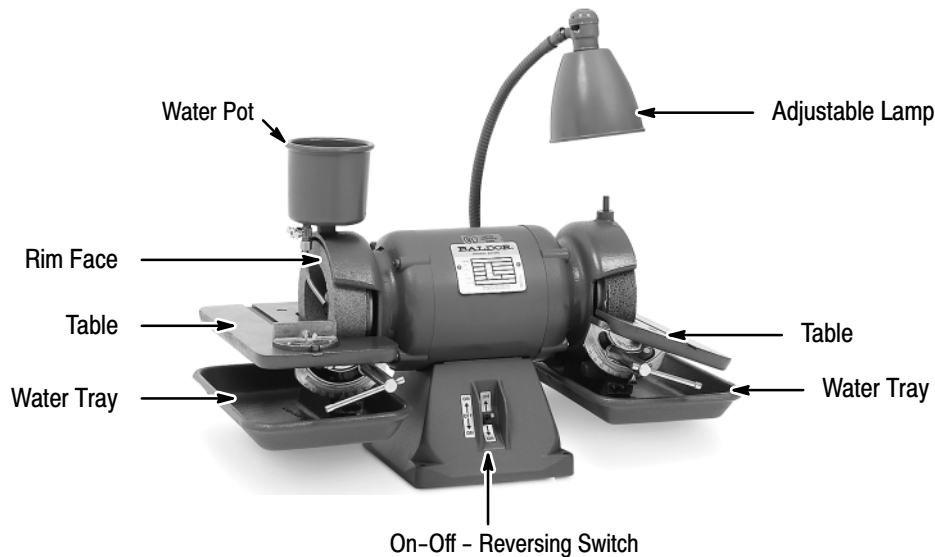
Replace a cracked or chipped wheel immediately. A cracked wheel will disintegrate when operated, causing a hazard to operator and nearby personnel. If a wheel has a chip or crack on any surface, do not use it.

Maintain $\frac{1}{8}$ " or less clearance between tool rest and wheel. This clearance is necessary to prevent the work piece from becoming wedged between the wheel and tool rest and restricting nip areas in the machine.

Grind on rim face (side) of wheels only. Grinding on outside diameter of wheel weakens the wheel and may cause wheel breakage.

Use wheels rated at or over 3600 RPM.

SAFETY NOTICE Continued



Installation

When you receive your unit, there are several things you should do immediately.

1. Observe the condition of the shipping container and report any damage immediately to the commercial carrier that delivered the product.
2. Verify that the part number you received is the same as the part number listed on your purchase order.

WARNING: When starting a grinder for the first time, or after installing a replacement grinding wheel, it is most important that the operator stand aside for at least one minute of rotation at full speed. This is the correct practice since grinding wheels can disintegrate if they have received damage during shipping or handling.

3. Mount grinder on solid bench. The grinder must be securely bolted to a rigid mounting surface. If a pedestal is used, first bolt pedestal securely to floor and then bolt grinder to pedestal.
4. Check grinder nameplate to make certain the rating is correct for the power source, voltage and frequency. See electrical and grounding instructions for electrical service connection.

WARNING: Never install a wheel that is damaged, such as a chip or crack on any surface. A damaged wheel can disintegrate while rotating at a high RPM or when work is placed against the wheel. This can severely harm the operator or others in the area.

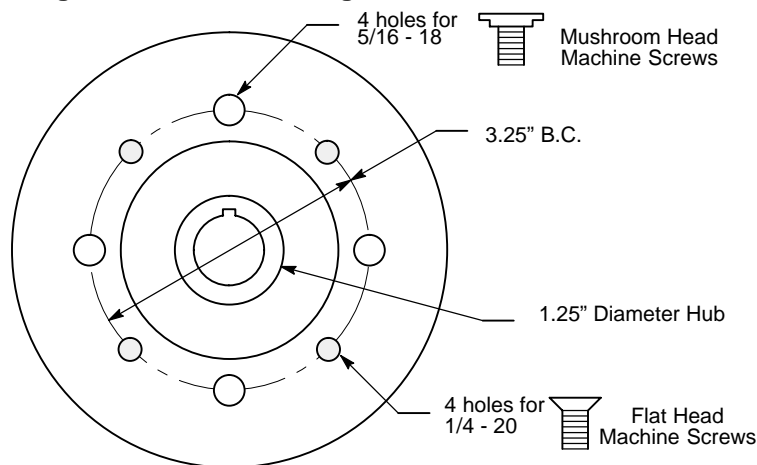
5. Inspect each Wheel
Carefully inspect the grinding wheels for damage. Never install a wheel that shows any sign of damage such as a chip or crack on any surface. A damaged wheel can disintegrate while rotating at a high RPM or when work is placed against the wheel. This can severely harm the operator or others in the area.

Note: Baldor catalog items #500 and #510 are supplied with mushroom head machine screws. Baldor catalog items #522 and #532 Diamond wheel grinders are supplied with both types of hardware.

WARNING: Never install a wheel that is damaged, such as a chip or crack on any surface. A damaged wheel can disintegrate while rotating at a high RPM or when work is placed against the wheel. This can severely harm the operator or others in the area.

6. Install the Grinding Wheels (see Figure 1).
 - a. Plate Mounted Wheels
Remove the machine screws from the wheel flange. Attach the wheel to the wheel flange using four 5/16-18 mushroom head machine screws.
 - b. Diamond Wheels
Remove the machine screws from the wheel flange. Attach the wheel to the wheel flange using four 1/4-20 flat head machine screws.

Figure 1 Wheel Mounting Hole Locations

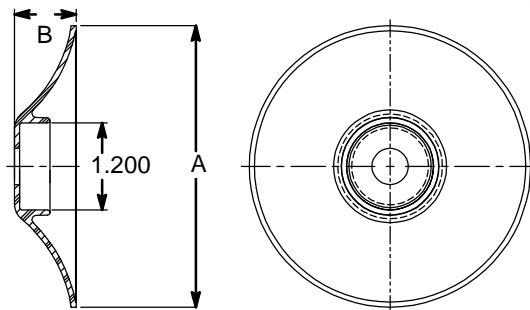


7. Carefully inspect each wheel for damage. If damaged, remove and discard the wheel and install a new wheel. Never use a defective wheel.
8. Install the Arbor/Wheel Mounting Screw Covers:

Tool grinders are supplied with covers for the arbor nut and wheel mounting screws (see Figure 2). There are two sizes. Smaller diameter covers are for plate mounted wheels with 4-inch diameter center. Larger diameter covers are for diamond wheels with 4 1/2-inch diameter center. Carbide and diamond wheel tool grinders are supplied less grinding wheels. After installing the desired grinding wheels, tighten wheel mounting screws and install arbor/wheel mounting screw covers.

 - a. Select the arbor/wheel mounting screw cover that is correct for the wheel center diameter.
 - b. Center the inner hub of the cover over the shaft arbor nut.
 - c. Using a light mallet (rawhide or plastic head type), lightly tap the cover over the arbor nut. The cover should seat firmly on the arbor nut with no cocking or wobbling around the outside diameter of the cover.
 - d. To remove the arbor/wheel mounting screw covers, use a flat blade tool such as a straight blade screwdriver to lift the edge of the cover. Go around the complete circumference of the cover, lifting gently around the edge until it comes loose from the arbor nut.
 - e. Remove the wheel mounting screws to replace the wheel.
Never loosen or remove the shaft arbor nut.
 - f. Replace the wheel and wheel mounting screws. Follow the instructions supplied with the new grinding wheel. Install the arbor/wheel mounting screw cover removed in steps "a" through "c".

Figure 2 Covers for Arbor Nut and Wheel Mounting Screws

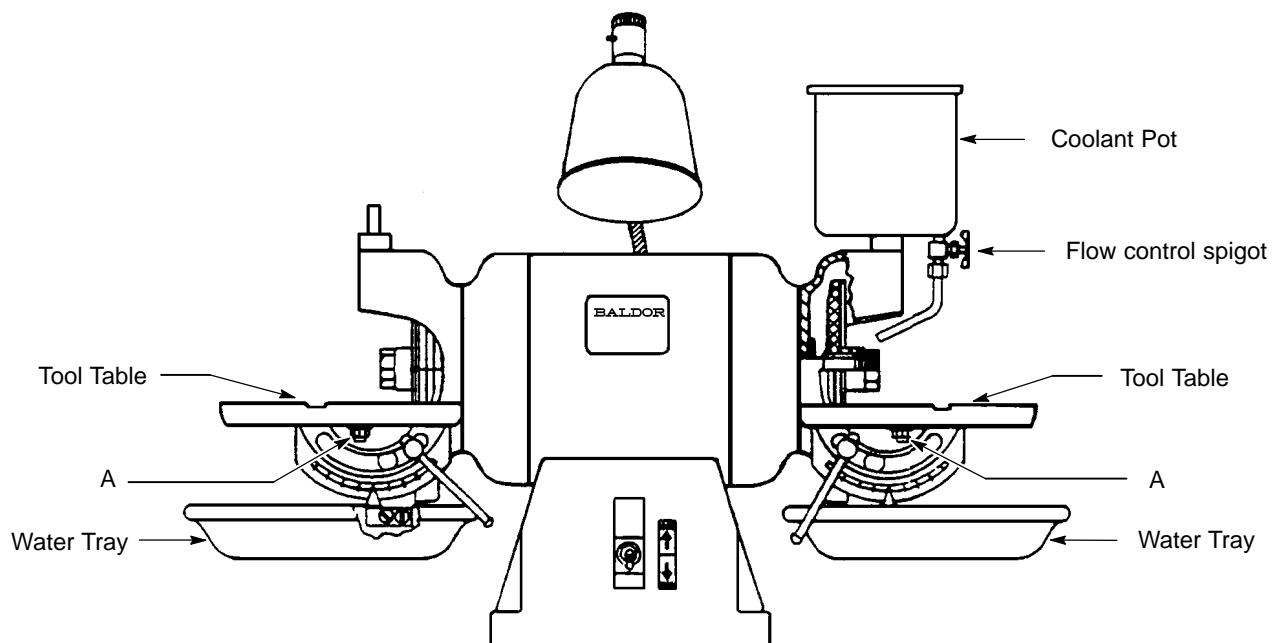


Part Number	"A" Dimension	"B" Dimension
G9AP1008A01	3.875	0.850
G9AP1008A02	4.425	0.625

Installation Continued

9. Install the Tool Tables. Each tool table has two mounting studs extending from the bottom (location A in Figure 3).
 - a. Position table so the studs are in the slotted holes of the rocker (location A in Figure 3).
 - b. Install washers and nuts provided to secure the tool table to the rocker.
 - c. Adjust table for about $\frac{1}{16}$ " clearance between the table and rim face of the grinding wheel then tighten the nuts.
 - d. Repeat steps "a" through "c" for the other tool table.
10. Install the Water Trays. Each tray has two mounting holes that slide onto two pins on its rocker.
 - a. Slide the water tray onto the mounting pins located below the tool table and between the front and rear surfaces of the rocker.
 - b. Be sure the tray is securely seated on the pins so you can see the ends of the pins in the mounting holes.
 - c. Repeat Steps a and b for the the other tray.

Figure 3 Tool Table and Water Tray Locations



Electrical Instructions

Single phase grinders are rated dual voltage. Some single phase grinders are equipped with cord and grounding type plug for 115 volts. To use with a different voltage, see instructions provided to make wiring changes. All attachment plugs and any receptacles must be replaced with devices rated for the voltage for which the grinder is reconnected. Table 1 indicates the minimum wire size. Be sure to comply with NEC and local wiring codes.

Three phase grinders are normally dual voltage and must be wired for the proper voltage and rotation direction (connections are inside conduit box). Connect phase sequence so that the wheel moves down toward top surface of tool rest as viewed from front of grinder. Wheel must rotate toward tool rest. Be sure all electrical connections are secured and properly insulated. For your safety, be certain grinder is properly grounded.

Grounding Instructions

WARNING: Be sure the system is properly grounded before applying power. Do not apply power before you ensure that grounds are connected. Electrical shock can cause serious or fatal injury. Follow the National Electrical Code (NEC) and local codes for the safe installation of this equipment.

1. **All grounded, cord-connected grinders:**

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This grinder is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The "Green" insulated wire (with or without yellow stripes) is the equipment-grounding conductor. If repair or replacement of the electric cord is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

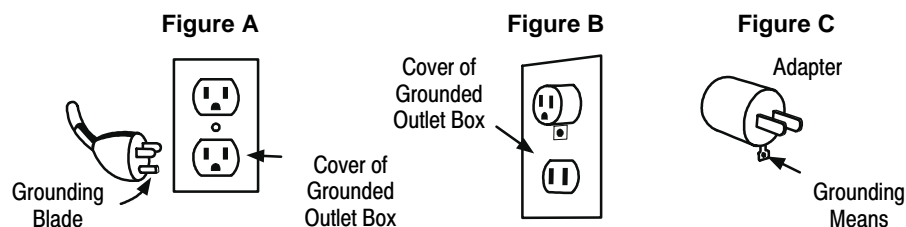
Repair or replace damaged or worn cord immediately.

2. Grounded, cord-connected grinders intended for use on a supply circuit having a nominal rating less than 150 volts:

This grinder is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure A. The tool has a grounding plug that looks like the plug illustrated in Figure A. A temporary adapter, which looks like the adapter illustrated in Figures B and C, may be used (except in Canada) to connect this plug to a 2-pole receptacle as shown in Figure B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, etc. extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

3. Permanently connected grinders:

This grinder should be connected to a grounded, metal, permanent wiring system; or to a system having an equipment-grounding conductor.



Operation

WARNING: Do not operate this grinder until you are sure that you are completely familiar with the safe operation of the grinder, all accessories and safety equipment. Improper use can lead to severe injury. This manual defines proper use of this equipment. Before using this equipment for any other use, please consult Baldor. Contact Baldor if you do not understand any procedure or operation concerning this grinder or this manual.

WARNING: When starting a grinder for the first time, or after installing a replacement grinding wheel, it is most important that the operator stand aside for at least one minute of rotation at full speed. This is the correct practice since grinding wheels can disintegrate if they have received damage during shipping or handling.

Check that the On–Off switch is in the “OFF” position, and the grinding wheels move freely. When starting the grinder for the first time or after replacing a wheel, it is important that the operator stand aside for at least one minute of operation at speed. This will ensure that operation will be safe from debris. A damaged grinding wheel can disintegrate causing a hazard for nearby personnel. After connecting grinder to power source, turn switch on. Tool grinder should come up to speed smoothly and without vibration. If grinder does not, shut off immediately, remove from power source and determine reason. Make necessary corrections before operating grinder.

As grinding wheel wears, maintain the maximum clearance of $\frac{1}{8}$ ” between table and rim face of the wheel. Suggested clearance is $\frac{1}{16}$ ” when making adjustments.

Grind on rim face of wheel only.

Maintenance

WARNING: Prevent electrical shock hazard and accidental machine operation. Always disconnect grinder from the power source before servicing, changing accessories (such as wheels, tool rest, spark arrestor, etc.) or before performing maintenance.

WARNING: Never install a wheel that is damaged, such as a chip or crack on any surface. A damaged wheel can disintegrate while rotating at a high RPM or when work is placed against the wheel. This can severely harm the operator or others in the area.

Replace worn grinding wheel as necessary. When replacing a worn wheel, remove all grinding dust from wheel guard.

Motor and pulley bearings are lubricated for life and do not require additional lubrication.

Replacement wheels may be purchased directly from your local industrial supply dealers, abrasive dealers, tool dealers, etc.

Remove grinding dust to prevent accumulation.

Replace damaged parts immediately to maintain safety of machine.

Table 1 Minimum Gauge Wire Size

Ampere Rating		Volts	Total Length of Cord (Cord + Extension, in Feet)			
		115V	25	50	100	150
		230V	50	100	200	300
More Than	Not More Than		AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

LIMITED WARRANTY

Unless otherwise provided, Baldor grinders are warranted against defects in Baldor workmanship and materials for a period of Thirty-Six months. All warranty claims must be submitted to a Baldor repair facility prior to the expiration of the warranty period. Baldor shall have no responsibility or liability for any defect, latent or otherwise, discovered after the expiration of the warranty period provided herein. Extended warranties are available for certain Baldor products. These warranties are described in Baldor's catalog and other sales literature. Extended warranties are subject to the terms and conditions of this Limited Warranty as modified by the additional terms of the extended warranty. If a Baldor product is defective due to Baldor workmanship or materials and the defect occurs during the warranty period, then Baldor will either repair the product or replace it with a new one, whichever Baldor believes to be appropriate under the circumstances. Warranty service is available for all Baldor products from Baldor's Customer Service Department in Fort Smith, Arkansas, and from Baldor repair facilities. A list of Baldor's repair facilities may be obtained by contacting Baldor at: Baldor Electric Company, 5711 R.S. Boreham, Jr. St., Fort Smith, Arkansas, 479-646-4711 (phone), 479-648-5792 (fax). All Baldor products requiring warranty service shall be transported or shipped freight pre-paid, at the risk of the party requiring warranty service, to Baldor's Customer Service Department in Fort Smith, Arkansas or to a Baldor repair facility. Written notification of the alleged defect in addition to a description of the manner in which the Baldor grinder is used, and the name, address and telephone number of the party requiring warranty service must be included. Baldor is not responsible for removal and shipment of the Baldor product to the service center nor for the reinstallation of the Baldor product upon its return to the party requiring warranty service. Customers who are unable to take or ship the Baldor product to a Baldor repair facility, or who desire a repair to be made by other than a Baldor repair facility, should contact Baldor's Customer Service Department at 479-646-4711. Repair by anyone other than a Baldor repair facility must be approved in writing by Baldor in advance of such service. Problems with Baldor products can be due to improper maintenance, faulty installation, non-Baldor additions or modifications, or other problems not due to defects in Baldor workmanship or materials. If a Baldor repair facility determines that the problem with a Baldor product is not due to defects in Baldor workmanship or materials, then the party requiring warranty service will be responsible for the cost of any necessary repairs. Parties requiring warranty service not satisfied with a determination that a problem is outside of warranty coverage should contact Baldor's Customer Service Department at 479-646-4711 for further consideration.

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