



MODEL G0974
METAL GRINDING
MACHINE w/DRO
OWNER'S MANUAL
(For models manufactured since 06/24)



*****Keep for Future Reference*****



WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support
1815 W. Battlefield
Springfield, MO 65807
Phone: (570) 546-9663
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual.**

If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **manufacture date** and **serial number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.

		MODEL GXXXX MACHINE NAME	
SPECIFICATIONS		 WARNING!	
Motor:		To reduce risk of serious injury when using this machine:	
Specification:		1. Read manual before operation.	
Specification:		2. Wear safety glasses and respirator.	
Specification:		3. Make sure machine is properly adjusted/setup and	
Specification:		4. Make sure the motor has stopped and disconnect	
Weight:		power before adjustments, maintenance, or service.	
		5. DO NOT expose to rain or dampness.	
		6. DO NOT modify this machine in any way.	
		7.	
		8.	
		9. Do not use machine if impaired by drugs or alcohol.	
		10. Maintain machine carefully to prevent accidents.	

Manufactured for Grizzly in Taiwan

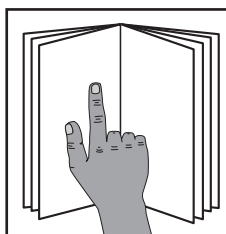
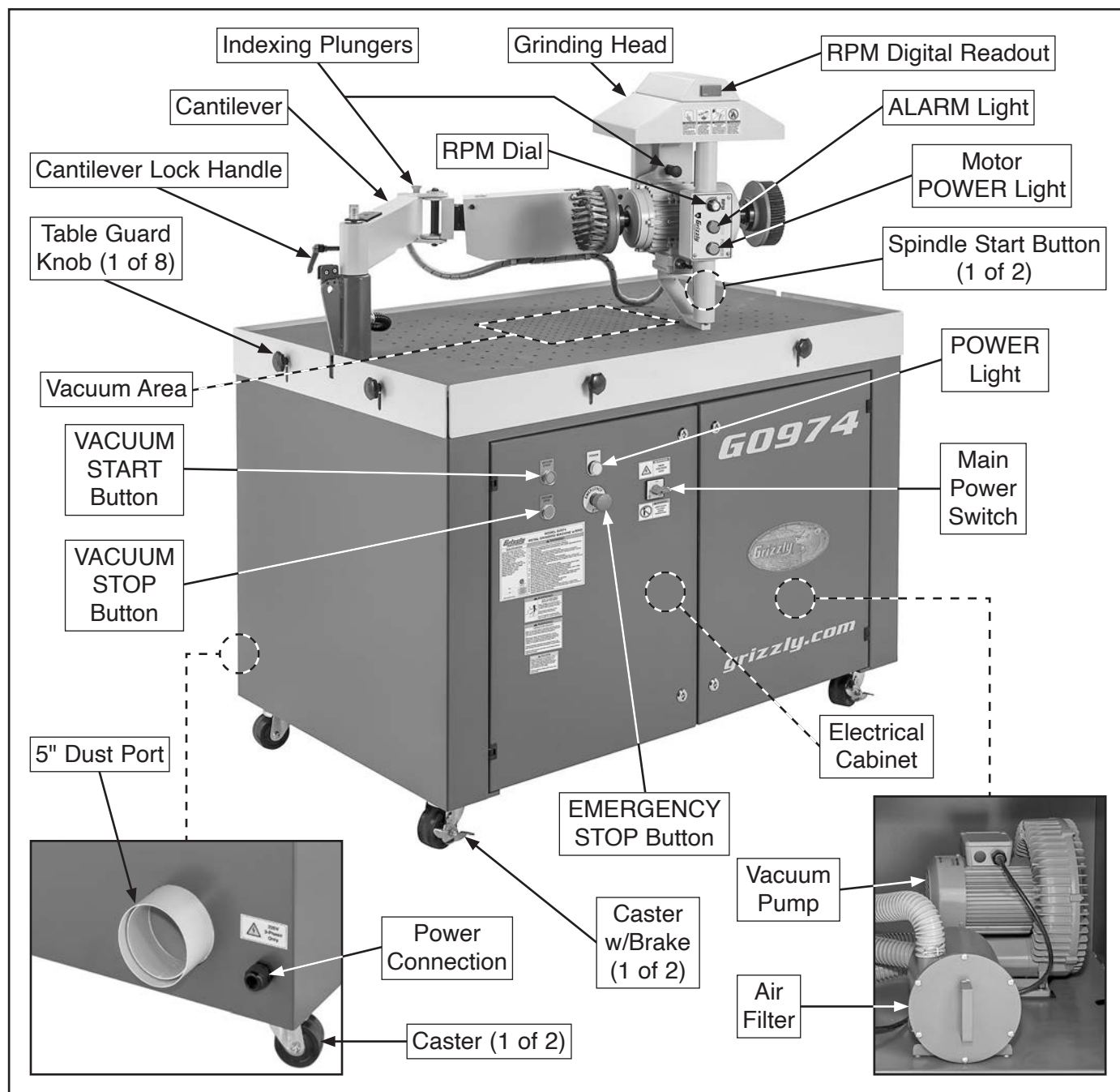
Manufacture Date:

Serial Number:



Identification

Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



⚠ WARNING

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

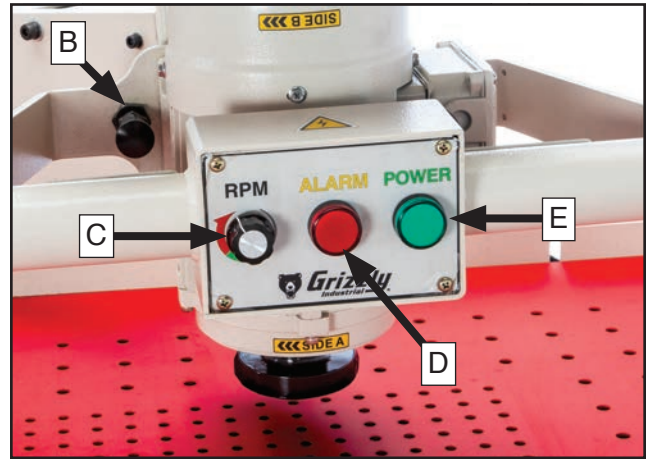
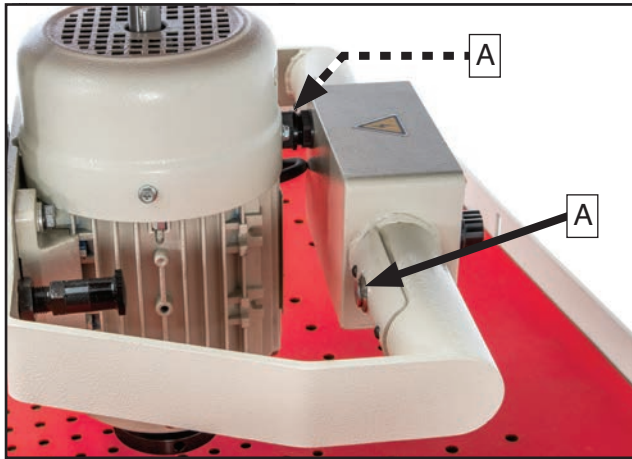


Controls & Components

HEAD CONTROLS

Before operating the machine it is important to know and understand the controls. The grinding head is spring loaded and direction and pressure are controlled by the operator.

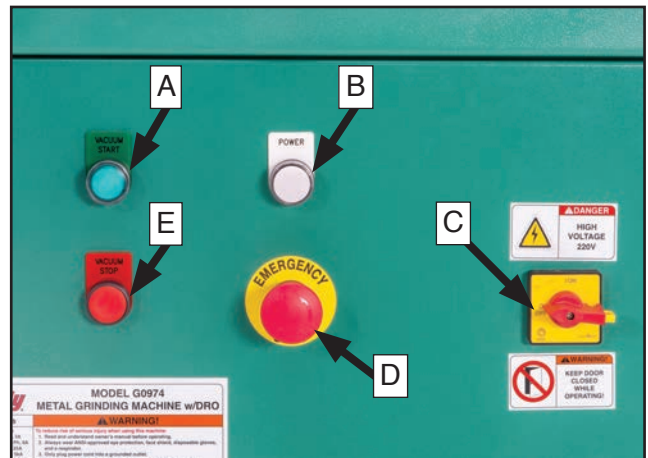
- A. **Spindle Start Buttons:** When both buttons are pressed, starts the spindle motor. Spindle motor will only activate if *both* buttons are pushed simultaneously.
- B. **Indexing Plungers:** Secures grinding head and cantilever. **Note:** Ensure that the indexing plungers are properly engaged in the locating holes to prevent any wobbling of the grinding head.
- C. **RPM Dial:** Increases or decreases the speed of the spindle motor.
- D. **ALARM Light:** Lights up in the event of a vacuum pump failure or the spindle motor coming to a stop.
- E. **Motor POWER Light:** The light will illuminate when the motor is running.



VACUUM SYSTEM

The Model G0974 features a powerful vacuum system that effectively secures the workpieces to the table during operations.

- A. **VACUUM START:** When pressed, it initiates the operation of the vacuum pump.
- B. **POWER Light:** Lights up when the main power switch is turned **ON**.
- C. **Main Power Switch:** Primary electrical switch that controls the power supply to the entire system, allowing it to turn the machine **ON** or **OFF**.
- D. **EMERGENCY STOP:** Pressing it will cut off power to all operations. To reset the switch, simply rotate the top clockwise until the red portion pops up.
- E. **VACUUM STOP:** When pressed, stops vacuum pump.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL G0974 METAL GRINDING MACHINE W/DRO

Product Dimensions:

Weight 750 lbs.
Width (side-to-side) x Depth (front-to-back) x Height 54 x 36 x 59 in.
Footprint (Length/Width) 52 x 32 in.
Full Range of Movement Width 113-1/2 in.
Full Range of Movement Depth 75 in.

Shipping Dimensions:

Type Wood Crate
Content Machine
Weight 926 lbs.
Length x Width x Height 61 x 43 x 60 in.
Must Ship Upright Yes

Electrical:

Power Requirement 220V, 3-Phase, 60 Hz
Full-Load Current Rating 14.25A
Minimum Circuit Size 15A
Connection Type Cord & Plug
Plug Included No
Recommended Plug Type 15-15
Power Cord Included No
Recommended Power Cord "S"-Type, 4-Wire, 10 AWG, 600 VAC
Switch Type ON/OFF Push Button & Trigger Switch w/Emergency Stop
Inverter (VFD) Type Delta MS300 VFD7A5MS23ANSAA
Inverter (VFD) Size 2 HP

Motors:

Main

Horsepower 1 HP
Phase 3-Phase
Amps 3A
Speed 1734 RPM
Type Induction
Power Transfer Direct
Bearings Sealed & Permanently Lubricated

Vacuum Pump

Horsepower 3 HP
Phase 3-Phase
Amps 9A
Speed 3380 RPM
Type Induction
Power Transfer Direct
Bearings Sealed & Permanently Lubricated



Main Specifications:

Operation Information

Minimum Workpiece Dimension.....	3-1/8 x 1-7/8 in.
Wet Grinding.....	No
No of Spindle Speeds	Variable
Spindle Speed Range	240 - 1500 RPM

Spindle Information

Spindle Diameter.....	19mm
Spindle Flange Length	45mm
Spindle Flange Diameter.....	25mm
Spindle Flange Thread Pitch.....	M8-1.25
Left Spindle Rotation.....	Clockwise
Right Spindle Rotation.....	Counter-Clockwise
Left Spindle Thread Direction.....	Right Hand
Right Spindle Thread Direction	Left Hand
Spindle Tilt (Left/Right).....	180 Deg.

Filter Information

Number of Filters.....	1
Filter Type.....	Canister Filter
Filter Rating.....	2 - 5 Microns @ 99%
Filter Size	150 x 215mm

Construction

Base	Steel
Table	Steel
Table Cover	Rubber
Paint Type/Finish.....	Urethane

Table Information

Table Length.....	31-1/2 in.
Table Width.....	51-3/8 in.
Table Height (from Floor/Base)	36 in.
Table Weight Capacity.....	242 lbs.
Vacuum Table Length.....	9-7/8 in.
Vacuum Table Width.....	13-3/4 in.
Number of Vacuum Zones	1
Table Guard Thickness.....	1/8 in.
Table Guard Height (Useable).....	2-1/2 in.

Other Related Information

Number of Dust Ports.....	1
Dust Port Size	5 in.

Other Specifications:

Country of Origin.....	Taiwan
Warranty.....	1 Year
Approximate Assembly & Setup Time.....	1 Hour
Serial Number Location	ID Label
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Features:

- Four-Point Articulating Arm w/Weight Compensation
- Four Swivel Casters for Maneuverability
- Dual-Spindle 1 HP Motor Rotates 180 Degrees
- Variable Spindle Speed w/Digital Readout
- Vacuum Table for Small Workpieces (3-1/8 in. x 1-7/8 in. Minimum)
- 3 HP Vacuum Pump w/Air Filter
- Four Adjustable Table Guards



Accessories:

Hex Wrench Set (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10mm)

Optional Accessories (Not Included):**Ceramic Abrasive Disc (T34037, T34038)**

Disc Type.....Hook & Loop
Disc Material.....Aluminum Oxide
Disc Diameter.....155mm
Disc Grit.....60 & 120
Maximum Speed Rating.....2200 RPM
Maximum Workpiece Height 3-15/16 in.

Deburring, Single Row (T34039, T34040, T34041, T34042, T34043, T34044, T34045, T34046)

Wheel Material Aluminum Oxide, Zirconium, Silicon Carbide
Wheel Diameter.....155mm
Wheel Bore.....25mm
Wheel Rotation Direction.....Clockwise
Maximum Speed Rating.....1600 RPM
Maximum Workpiece Height 3-1/8 in.

Deburring, Double Row (T34047, T34048, T34049)

Wheel Material Aluminum Oxide, Zirconium, Silicon Carbide
Wheel Diameter.....155mm
Wheel Bore.....25mm
Wheel Rotation Direction.....Clockwise
Maximum Speed Rating.....1600 RPM
Maximum Workpiece Height 3-1/8 in.

Deburring, Double Row HERO (T34050, T34051, T34052, T34053, T34054, T34055, T34056)

Wheel Material Aluminum Oxide, Zirconium, Silicon Carbide
Wheel Diameter.....155mm
Wheel Bore.....25mm
Wheel Rotation Direction.....Clockwise
Maximum Speed Rating.....1600 RPM
Maximum Workpiece Height 3-5/16 in.

Deslagging Brush (T34057)

Wheel Material Steel
Wheel Diameter.....155mm
Wheel Bore.....25mm
Wheel Rotation Direction.....Clockwise
Maximum Speed Rating.....700 RPM
Maximum Workpiece Height 2-3/8 in.

Oxide Brush (T34058)

Wheel Material Stainless Steel
Wheel Diameter.....155mm
Wheel Bore.....25mm
Wheel Rotation Direction.....Clockwise
Maximum Speed Rating.....700 RPM
Maximum Workpiece Height 2-3/8 in.

Surface Conditioning Disc (T34061)

Disc Type.....Hook & Loop
Disc Material.....Aluminum Oxide
Disc Diameter.....155mm
Disc Grit.....180
Maximum Workpiece Height 3-15/16 in.



SAFETY

For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.



Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

Alerts the user to useful information about proper operation of the machine to avoid machine damage.

Safety Instructions for Machinery



OWNER'S MANUAL. Read and understand this owner's manual **BEFORE** using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS.

You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



WARNING

WEARING PROPER APPAREL. Do not wear loose clothing, gloves, neckties, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

HAZARDOUS DUST. Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly **BEFORE** operating machine.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

DAMAGED PARTS. Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace **BEFORE** operating machine. For your own safety, **DO NOT** operate machine with damaged parts!

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—**NOT** the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.



Additional Safety for Metal Grinding Machines

WARNING

Serious injury or death can occur from fingers, clothing, jewelry, or hair getting pinched/entangled in rotating components. Workpieces or flying debris thrown by machine can strike operator or bystanders, causing impact injuries or blindness. Amputation or abrasion injuries can occur from touching moving abrasives. Long-term respiratory damage can occur from using machine without wearing a respirator. To reduce the risk of these hazards, operator or bystanders **MUST** completely heed the hazards and warnings below.

DISC INSPECTION. Worn or damaged abrasive discs can fly apart and throw debris, or aggressively grab workpiece. Before installing an abrasive disc, visually check it for cracks, chips, nicks or dents in the disc surface. Do not use the disc if it fails inspection. Never use a disc that has been dropped or received a heavy blow, even if there is no obvious damage.

SPINDLE STARTUP. To protect yourself, always stand to the side of the spindle until the abrasive disc reaches full speed, and never start spindle with abrasive disc contacting workpiece. Allow spindle to run for at least one minute before operating. If a disc is damaged, it may fly apart shortly after startup.

SPEED RATING. Abrasive discs operated at a faster speed than rated for may break or burst. Before mounting a new disc, be sure disc RPM rating is equal to or higher than rated speed of spindle. Never use unmarked discs.

DISC BORE. Only use abrasive discs with same bore as spindle flange, and only those recommended in this manual.

CONTACTING MOVING DISC. Discs can quickly remove a lot of skin. Make sure workpiece is securely attached to table, then position hands a safe distance away when operating.

MINIMUM STOCK DIMENSIONS. Never use workpiece smaller than minimum workpiece dimensions shown in this manual. Impact injuries may result from using improper workpieces.

AVOIDING ENTANGLEMENT. Becoming entangled in moving parts can cause severe injury or death. Do not wear gloves, necktie, or loose clothing. Keep long hair away from rotating spindle.

WEAR PROPER PPE. Abrasives eject small particles at a high rate of speed. These particles can cause blindness, skin injuries or respiratory damage. ALWAYS wear cotton clothing, safety goggles or glasses with side shields, face shield, and a respirator appropriate for the material type.

HOT WORKPIECES. Workpieces can be sharp and get hot during abrasive operations. Use leather gloves or shop rags to protect your hands when placing or removing workpieces. Remove gloves before operating machine.

FLAMMABLE MATERIALS. This machine creates hot sparks that can ignite explosive or flammable materials nearby. Move these types of materials a minimum of 50' from work area.

FIRE & EXPLOSIONS. NEVER use this machine to process magnesium. Fumes, sparks, and fine metal dust particles from operations can ignite, depending on material type and circumstances. Inspect compartments for smoldering combustibles before leaving machine unattended. Be prepared to safely fight a combustible metal fire.

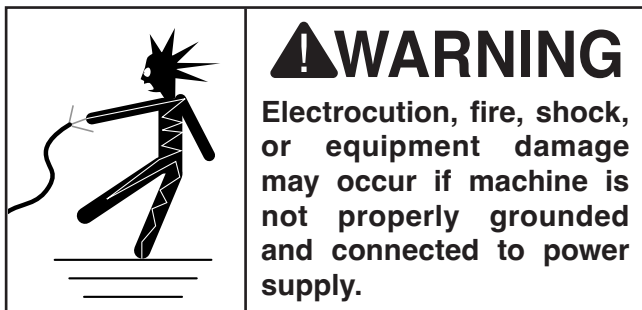
TOXIC METALS. Exposure (or over-exposure) to certain types of metal dusts or fumes can result in serious, potentially deadly health effects. To reduce this risk, research toxicity of metal types you work with and always seek to minimize/eliminate exposure to yourself and others.



POWER SUPPLY

Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 220V . 14.25 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

Circuit Requirements for 220V

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage 208V, 220V, 230V, 240V
Cycle.....60 Hz
Phase..... 3-Phase
Power Supply Circuit 15 Amps
Plug/Receptacle NEMA 15-15
Cord "S"-Type, 4-Wire, 10 AWG, 600 VAC

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

! CAUTION

For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.

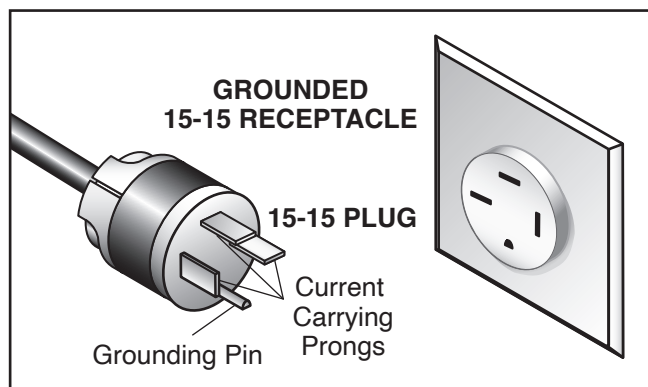
Note: *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*



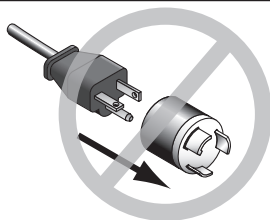
Grounding Instructions

This machine **MUST** be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

The power cord and plug specified under "Circuit Requirements for 220V" on the previous page has an equipment-grounding wire and a grounding prong. The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances (see figure below).



! CAUTION



No adapter should be used with plug. If plug does not fit available receptacle, or if machine must be reconnected for use on a different type of circuit, reconnection must be performed by an electrician or qualified service personnel, and it must comply with all local codes and ordinances.

! WARNING

Serious injury could occur if you connect machine to power before completing setup process. DO NOT connect to power until instructed later in this manual.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the machine is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Extension Cords

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

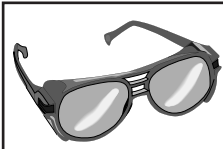
Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

Minimum Gauge Size 14 AWG
Maximum Length (Shorter is Better).....50 ft.



SETUP



! WARNING
Wear safety glasses during
the entire setup process!

Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Additional Person	1
• Safety Glasses (for each person).....	1
• Forklift or Hoist (rated for at least 1160 lbs.)	1
• Prybar	1
• Power Drill w/Phillips Bit #2.....	1
• Power Cord, 10 AWG w/15-15 Plug.....	1
• Metal Dust Collection System	1
• Metal Ducting 5"	1
• Pipe Clamps 5"	2
• Cleaner/Degreaser (Page 14)	As Needed
• Disposable Shop Rags.....	As Needed
• Disposable Gloves	As Needed

Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

IMPORTANT: Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. ***You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.***

Inventory

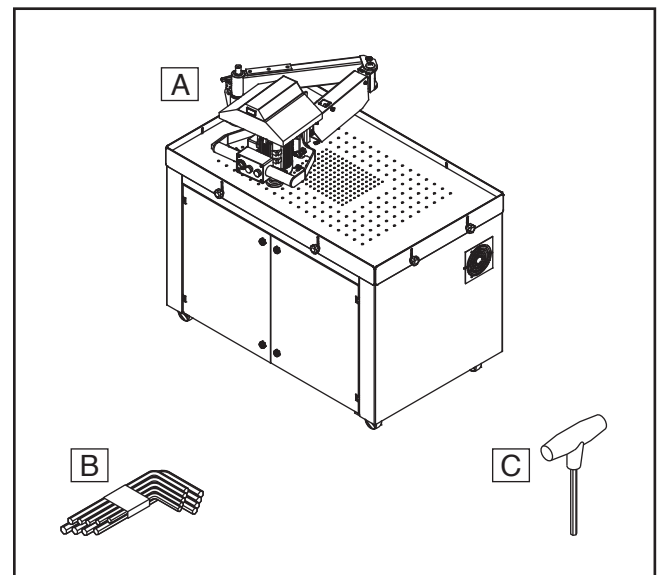
The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.

Crate Inventory	Qty
A. Metal Grinding Machine w/DRO.....	1
B. Hex Wrench Set (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10mm)	1
C. T-Handle Hex Wrench 6mm.....	1



Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD-40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

Basic steps for removing rust preventative:

1. Put on safety glasses.
2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.
3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

	⚠ WARNING Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery.
--	--

	⚠ CAUTION Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.
--	---

NOTICE Avoid harsh solvents like acetone or brake parts cleaner that may damage painted surfaces. Always test on a small, inconspicuous location first.

T23692—Orange Power Degreaser

A great product for removing the waxy shipping grease from the **non-painted** parts of the machine during clean up.

Order online at www.grizzly.com OR Call 1-800-523-4777	
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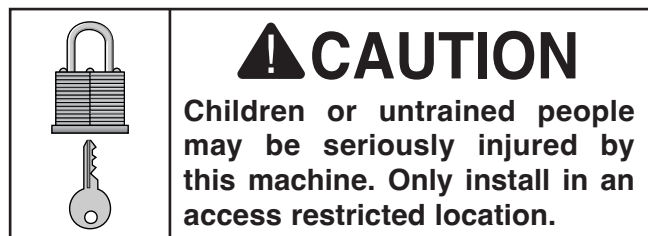
Site Considerations

Weight Load

Refer to the **Machine Data Sheet** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**



Physical Environment

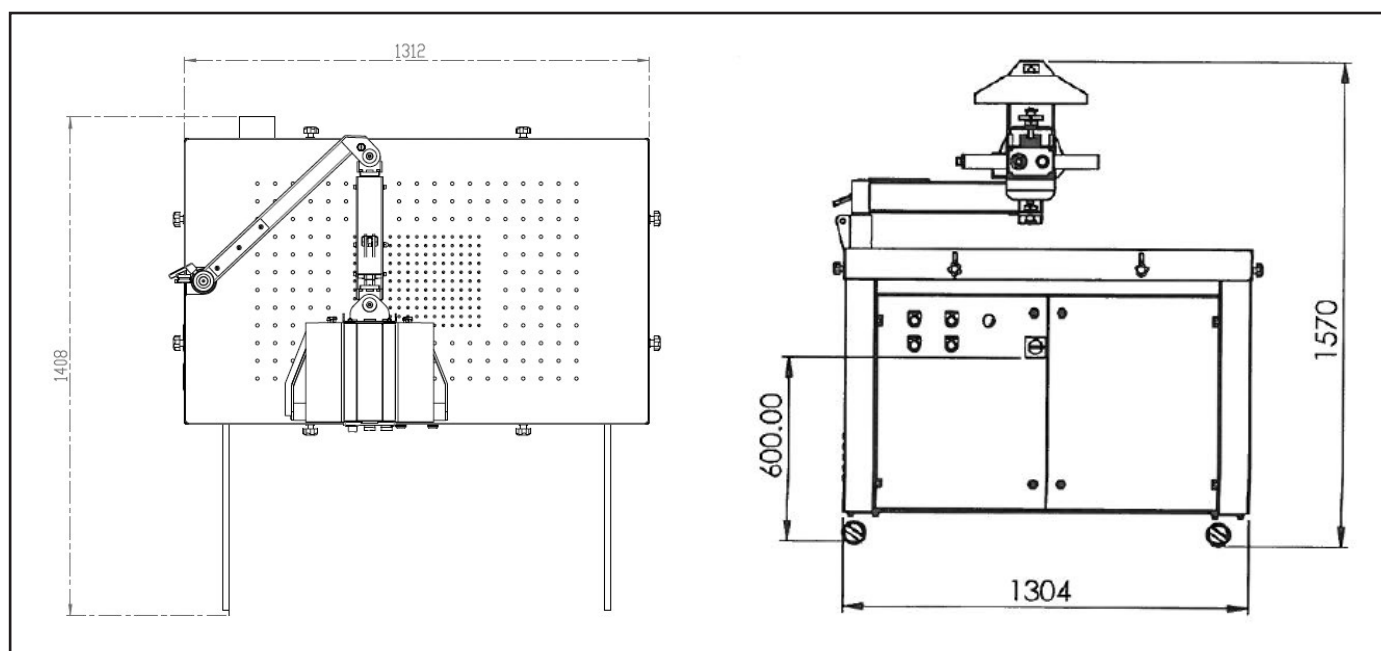
The physical environment where the machine is operated is important for safe operation and longevity of machine components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20%–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

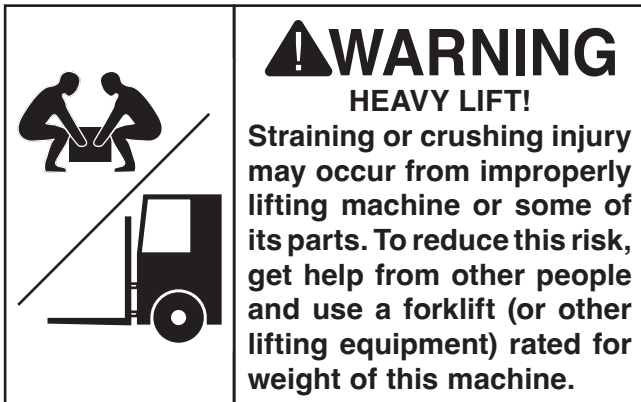
Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.



Lifting & Placing



The Model G0974 requires the use of lifting equipment such as a forklift, engine hoist, or boom crane. DO NOT attempt to lift or move machine without necessary assistance from other people. Each piece of lifting equipment must be rated for **at least 1160 lbs.** to support dynamic loads that may be applied while lifting.

Review **POWER SUPPLY** on **Page 11**, then prepare a permanent location for the machine.

To lift and place machine:

1. Move crate to desired location.
2. Remove crate top and sides and any blocks around machine base, then unbolt machine from shipping pallet.
3. Remove support straps or shipping brackets securing machine components, and any loose parts in shipping container.
4. With help from an additional person, use lifting equipment to raise machine just enough to clear shipping pallet, then remove pallet.
5. Lower machine to floor and lock (2) casters w/brakes before proceeding to **Dust Collection**.

Dust Collection

! WARNING

This machine creates a lot of sparks/metal dust during operation. Use a metal dust collector to help reduce airborne dust levels and reduce the risk of dust inhalation. Metal dust collectors also help contain sparks so they do not contact flammable or combustible materials and create a dust related fire/explosion.

Minimum CFM at Dust Port: 600 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.

To connect a metal dust collection system to this machine:

1. Fit 5" ducting over dust port and secure in place with a pipe clamp.



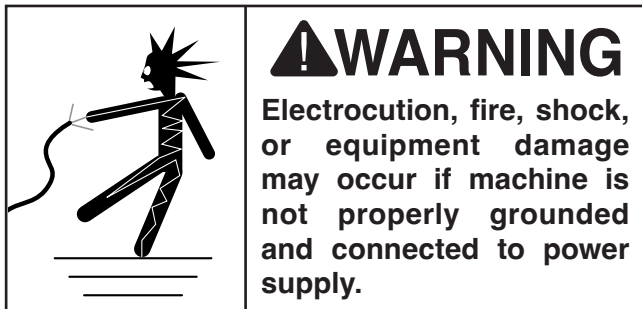
2. Tug ducting to ensure it does not come off.

Note: A tight, secure fit is necessary for proper performance.



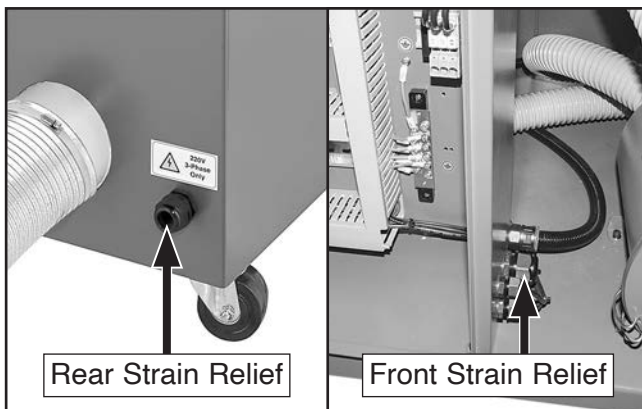
Power Connection

Before the machine can be connected to the power source, an electrical circuit and connection device must be prepared per **POWER SUPPLY** on **Page 11**, and all previous setup instructions in this manual must be complete to ensure that the machine has been assembled properly.



To connect power cord to machine:

1. VERIFY PLUG IS NOT CONNECTED TO POWER SUPPLY!
2. Open cabinet doors and loosen (1) strain relief on rear of machine, and (1) strain relief in front section of cabinet.

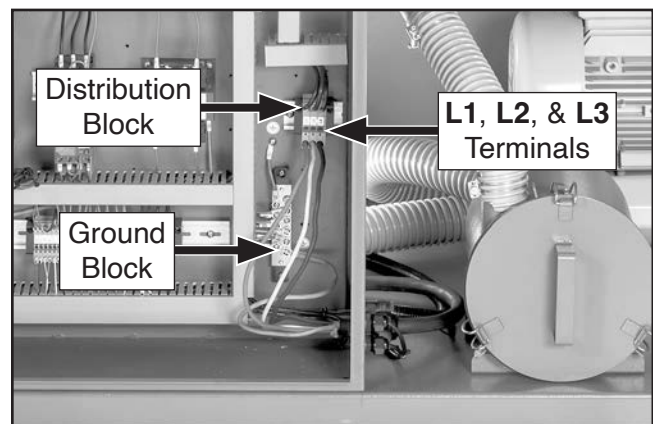


!WARNING

During next step, make sure incoming ground wire is connected to correct terminal to ensure machine will be properly grounded (see "Ground Block" in figure). An ungrounded or improperly grounded machine can cause electrocution if live electrical wires make contact with frame or other parts touched by operator.

3. Route power cord through (2) strain reliefs and connect power wires to **L1**, **L2**, and **L3** terminals on distribution block, then connect green ground wire to ground block.

Note: Make sure wires have enough slack inside electrical cabinet so they are not pulled tight or stretched.



4. Tighten strain reliefs to secure power cord, then close and secure cabinet doors.

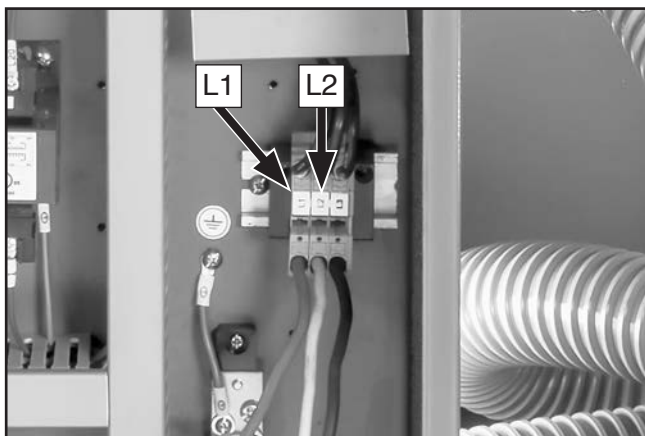


Correcting Phase Polarity

If you discover during the test run that the machine will not operate, or that the spindle motor runs opposite of direction arrows, the plug may be wired "out of phase," meaning that the polarity is incorrectly wired.

To correct phase polarity:

1. DISCONNECT MACHINE FROM POWER!
2. Open electrical cabinet and swap incoming power wires connected to **L1** and **L2** terminals of distribution block.



3. Close and secure electrical cabinet.
4. Follow **Test Run** on **Page 19** to ensure machine functions properly.

Phase Converters

DO NOT use a static phase converter to create 3-phase power—it can quickly decrease the life of electrical components on this machine. If you must use a phase converter, only use a rotary or digital phase converter.

You can find the Model H5845, a compatible phase converter, on our website at www.grizzly.com.

H5845—10 HP Rotary Phase Converter

This rotary phase converter allows you to operate 3-phase machinery from a single-phase power source at 100% power and 95% efficiency.



Test Run

WARNING

DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

WARNING

Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.

Once assembly is complete, test run the machine to ensure it is properly connected to the power and safety components are functioning correctly.

TO TEST RUN THE MACHINE:

- Clear all setup tools away from the machine.
- Adjust the table guard up to prevent workpieces from flying off the table while working, and make sure the table guard is secured.
- Make sure the indexing plunger is locked and the grinding head cannot be turned.
- Connect the machine to the power supply and turn the machine **ON**.
- Check that the direction of spindle motor matches direction of SIDE A and SIDE B labels. If the direction is incorrect, DISCONNECT MACHINE FROM POWER and proceed to **Correcting Phase Polarity** on previous page.
- Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.
- Any strange or unusual noises should be investigated and corrected before operating the machine again. Always disconnect the machine from power supply when investigating or correcting potential problems.

TESTING EMERGENCY STOP BUTTON

Make sure that the EMERGENCY STOP button is working correctly:

1. Twist the top of the EMERGENCY STOP button to ensure that it is in the raised position.
2. Turn machine **ON**, press both spindle start buttons, then press EMERGENCY STOP button. The machine should cease operation, and the power supply should be deactivated. If the machine cannot be started, this indicates that the EMERGENCY STOP is functioning correctly. To reset the EMERGENCY STOP, turn the red top until it pops up.



For issues concerning the VFD, contact DELTA to obtain an MS300 series manual, or visit their website at <https://deltaacdrives.com>. All VFD servicing should be done by an authorized and trained technician. The VFD parameters have been set at the factory to optimize the performance of the machine and should not be adjusted unless instructed by Grizzly Tech Support. Improper adjustments can cause machine damage, disable important safety features, and may void the warranty.

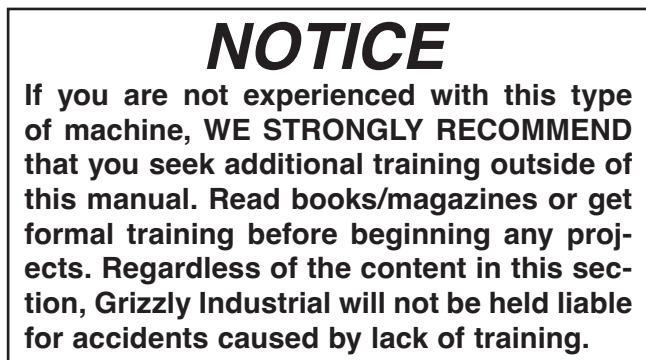
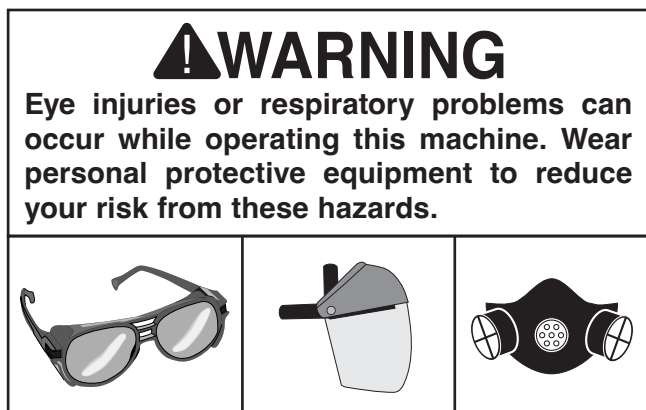


OPERATIONS

Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



To complete a typical grinding operation, the operator does the following:

1. Examines workpiece to make sure it is suitable for processing.
2. Inspects and installs abrasive disc with appropriate grit for operation on Side A and Side B of spindle, and verifies they rotate in the correct direction.
3. Places workpiece in vacuum area of table, loosens cantilever lock handle and pulls out indexing plunger, then positions grinding head over workpiece.
4. Ensures indexing plungers are locked in place during operations.
5. Raises table guards as high as possible, or as high as operation will allow.
6. Ties back loose hair and clothing, and puts on safety glasses, respirator, and face shield. Takes all other required safety precautions.
7. Starts vacuum and additional metal dust collection system.
8. Adjusts speed dial and monitors DRO to match speed rating of abrasive disc.
9. Holds grinding head handles firmly with both hands and turns spindle motor **ON** by pressing both spindle start buttons at once.
10. Lowers abrasive disc onto workpiece and moves it back and forth to wear abrasive disc evenly and to prevent it from overheating.
11. Releases spindle start buttons to turn spindle motor **OFF**, unlocks grinding head indexing plunger, and rotates head to opposite abrasive disc side for continued operations.
12. When operation is complete, stops spindle motor, turns vacuum **OFF**, then turns metal dust collection system **OFF**.



Selecting Abrasive Disc

!WARNING

Ensure abrasive disc does not exceed the maximum RPM rating marked on the disc, or listed in this manual.

!WARNING

Always verify abrasive discs are fitted to correct spindle side, and are rotating in the correct direction.

SLAG REMOVAL

DESLAGGING BRUSH — 155MM (T34057)

Slag hammer discs remove burrs and melted plasma or oxyfuel cut sheet metal parts.



OXIDE REMOVAL

OXIDE REMOVAL WIRE BRUSH — 155MM (T34058)

When components are cut with oxygen, they develop oxide layers on the cut edges. These dark layers can be effectively eliminated using the oxide brushes. The oxide brush is known for its innovative design, featuring a multi-row configuration of a specially engineered wire set. This arrangement not only ensures optimal removal of oxide layers but also guarantees long-lasting, metallurgically bright cut edges.



- Rotation speed (max.): 700rpm
- Rotation: Clockwise
- Country of origin: EU (Germany)



PRE-GRINDING & DEBURRING

ABRASIVE HOLDER (BACKING DISC) – 155MM (T34059, T34060)

Backing discs are used to hold hook-and-loop discs (abrasive and non-woven discs). Different hardnesses are used depending on the application.



- Rotation speed (max.): 2200rpm
- Rotation: Bi-directional
- Country of origin: EU (Germany)

CERAMIC ABRASIVE DISC – 155MM (T34037, T34038)

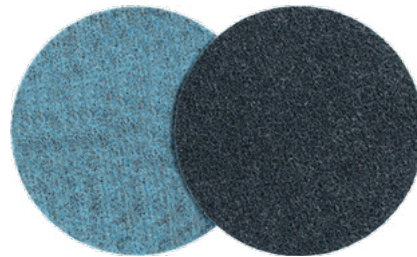
The abrasive discs are used for pre-grinding of sheet metal. For primary burr removal, grain sizes of 60 and 120 are available.



FINISHING

SURFACE CONDITIONING DISC – 155MM (T34061)

Surface conditioning disc for pre-grinding and finish grinding of surfaces and light deburring of metal and sheet metal. Available grain size is 180 grit.



DEBURRING & EDGE ROUNDING

DEBURRING DISC 155MM – SINGLE ROW (T34039, T34040, T34041, T34042, T34043, T34044, T34045, T34046)

The deburring discs incorporate a single row of abrasive material and are well-suited for the removal of light primary and secondary burrs, as well as for edge rounding of sheet metal. The unique design includes both non-woven abrasive and abrasive segments.

Aluminium Oxide – Brown - suitable for deburring and external edge rounding of mild steel applications.



Zirconium – Blue - suitable for deburring and strong external edge rounding of mild steel and stainless steel with a larger radius.



Silicon Carbide - Gray - suitable for aluminium and plastic applications and achieves good edge rounding.



- Rotation speed (max.): 1600rpm
- Rotation: Clockwise
- Country of origin: EU (Germany)



DEBURRING & EDGE ROUNDING (CONTINUED)

DEBURRING DISC 155MM – DOUBLE ROW (T34047, T34048, T34049)

Various types of abrasive are available for steel, stainless steel, aluminum, galvanized and foiled sheets, depending on the desired rounding and surface. Deburring discs with double row abrasive are equipped with more abrasive cloth and have a uniform pressure ratio compared to the standard.

Aluminium Oxide – Brown – suitable for deburring as well as internal and external edge rounding on mild steel applications.



- Rotation speed (max.): 1600rpm
- Rotation: Clockwise
- Country of origin: EU (Germany)



DEBURRING & EDGE ROUNDING (CONTINUED)

DEBURRING DISC 155MM – DOUBLE ROW - HERO (T34050, T34051, T34052, T34053, T34054, T34055, T34056)

HERO deburring discs represent a completely new tool for deburring and rounding sheet metal and metals. Perfect for large workpieces or maximum feeding rate.

Ceramic – Purple – suitable for pre-grinding of sheet metal and primary burr removal.



Zirconium – Blue - suitable for deburring as well as internal & external edge rounding of mild steel and stainless steel with a larger radius.



Silicon Carbide - Gray - suitable for aluminium and plastic applications and achieves good edge rounding on internal and external profiles.



- Rotation speed (max.): 1600rpm
- Rotation: Clockwise
- Country of origin: EU (Germany)



Removing/Installing Abrasive Disc

REMOVING/INSTALLING ABRASIVE DISC

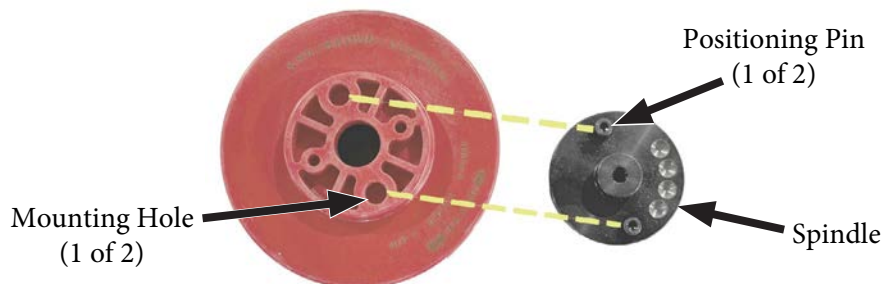
1. DISCONNECT THE MACHINE FROM POWER!
2. Grasp the disc firmly and use a 6mm hex key to turn the screw shown below counterclockwise to remove.



3. Remove the worn abrasive disc and replace with a new abrasive disc.



IMPORTANT: When installing the new disc, ensure that the two mounting holes on the disc base align with the two pins on the spindle (refer to the image below). Once properly aligned, install disc onto the spindle and secure.



Note: The back of the disc is marked with an arrow indicating the direction of rotation (clockwise, counterclockwise, or both directions). Install the disc with the correct rotation direction according to the label on the motor. Installing the disc in the wrong direction may result in the grinding head bouncing and becoming difficult to operate, posing a safety risk.

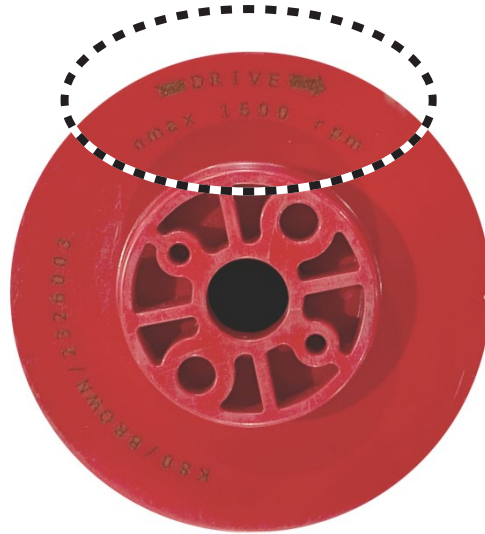


◀◀◀SIDE A

SIDE B ▶▶▶



IMPORTANT: Always pay attention to the installation direction required by the brush disc and adhere to its recommended maximum RPM. This not only ensures the operator's safety but also extends the lifespan of related consumables.



REMOVING/INSTALLING HOOK-AND-LOOP

1. DISCONNECT THE MACHINE FROM POWER!
2. To replace the worn-out abrasive, remove the used abrasive pad and affix a new one in the same location.
3. When the abrasive holder is damaged, replace the abrasive holder: Grasp the holder firmly and use a 6mm hex wrench to turn the screw counterclockwise and remove the screw. When installing the new holder, ensure that the two mounting holes on the holder base align with the two pins on the spindle. Once properly aligned, install holder onto the spindle and secure.

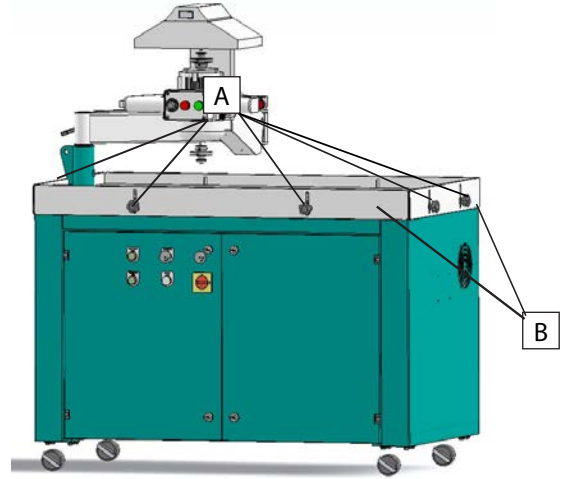


Adjusting Table Guard

Before operating the Model G0974, please note that to prevent the workpiece from being ejected from the worktable, there is a table guard installed around the worktable, which can be vertically adjusted.

TO ADJUST THE TABLE GUARD

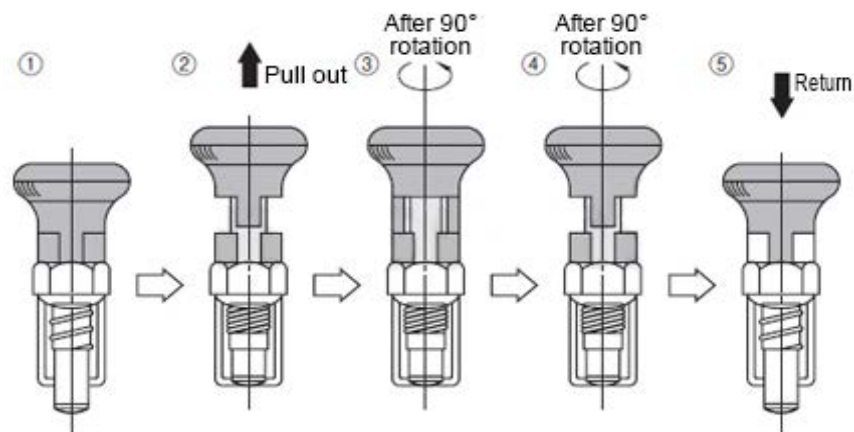
1. Loosen the fixture knobs (indicated as A) for the protective fence of the table guard.
2. Vertically adjust the table guard (indicated as B) to a sufficient height to protect the operator.
3. Secure the table guard by tightening the fixture knobs.



Adjusting Cantilever

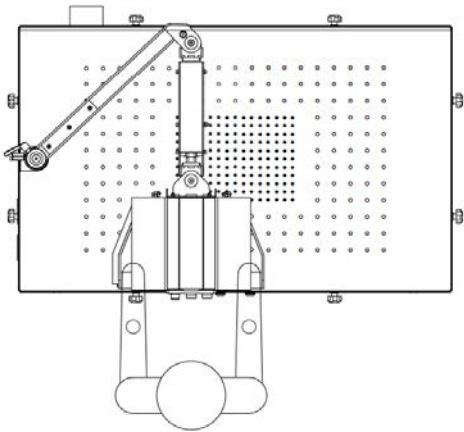
The following points describe how the indexing plunger functions:

- Unlock the adjustable handle and the indexing plunger at the cantilever joint.
1. Indexing plunger is engaged.
 2. The pin-end retracts when the knob is pulled out.
 3. If the knob is rotated 90° while pulled, the retraction state of the pin-end can be locked.
 4. To release the retracted pin, rotate knob 90° while pulling up.
 5. Release knob and the pin-end will engage.



Positioning Workpiece

Designated Work Position for Operators

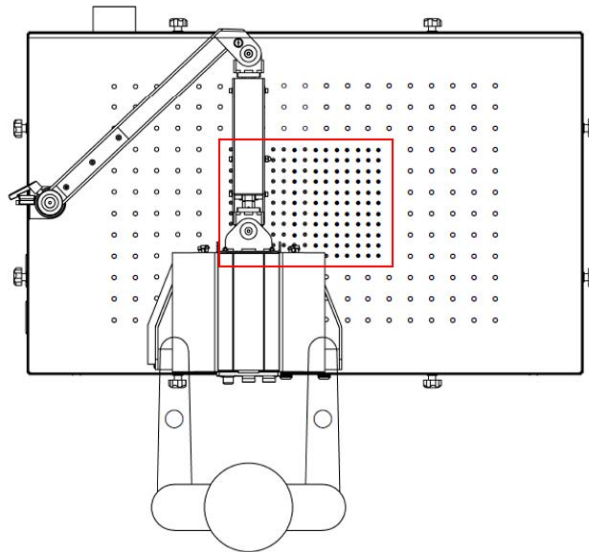


WARNING

Do not start spindle with abrasive disc touching workpiece. Workpiece could be ejected from machine at a high rate of speed, causing serious personal injury.

Machine operators should operate the machine from the designated position. Failure to operate the machine from the designated position may result in overlooking warning lights or other unforeseen risks.

Effective Area of Vacuum



After vacuum activation, the minimum workpiece size that can be processed is 80 x 50mm (approximately the size of a credit card).

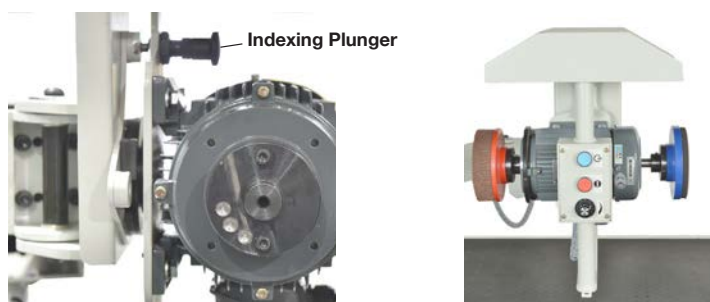
Note: The area circled in red represents the effective vacuum zone. It is essential to ensure that small workpieces are placed within this area. Even for larger workpieces, it is recommended to position them with the vacuum zone as the central reference point to securely hold them in place on the worktable before processing.

IMPORTANT: Before each operation, verify that the workpiece has been effectively secured and attached to the worktable by the vacuum to prevent safety issues, such as workpieces becoming dislodged during processing.



Rotating Grinding Head

The double-sided grinding head enables the installation of abrasive discs on both the top and bottom sides. The grinding head can be rotated 180 degrees for a swift interchange between the top and bottom abrasives, which is beneficial for tasks involving two distinct grinding processes. The head can be configured for these two processes, with one positioned at each end of the spindle, allowing access to both abrasives. The grinding head indexing plunger (which functions the same way as the cantilever indexing plunger described on **Page 28**) securely holds the grinding head in place, facilitating quick rotation.



Switching positions for replacing the abrasive disc

SPINDLE DIRECTION

Prior to using this machine, it is crucial for the operator to comprehend the importance of spindle rotation direction when choosing the abrasive disc.

Labels have been affixed to the motor to indicate the spindle's direction. The details provided below encompass both spindle direction and the fastening screws.



SIDE A: Rotates clockwise, and the screw that attaches the abrasive disc has right hand threads.



SIDE B: Rotates counterclockwise, and the screw that attaches the abrasive disc has left hand threads.

Note: The flanges securing the abrasive discs are carefully balanced and have been properly installed to match the spindle's rotation direction. It is advisable not to remove them, as they cannot be interchanged.



ACCESSORIES

WARNING

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

NOTICE

Refer to our website or latest catalog for additional recommended accessories.

T26419—NLGI#2 Syn-O-Gen Synthetic Grease

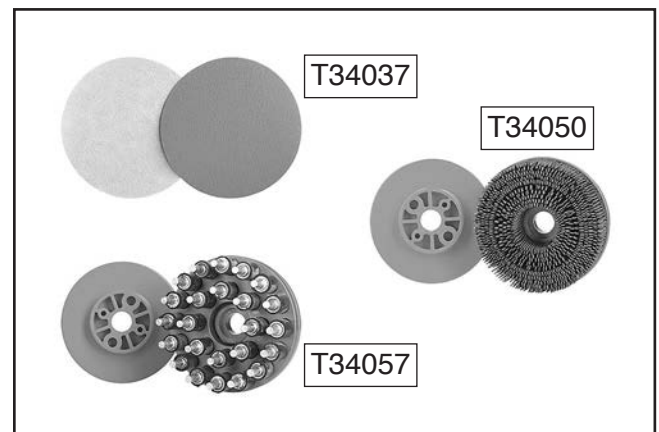
Formulated with 100% pure synthesized hydrocarbon basestocks that are compounded with special thickeners and additives to make Syn-O-Gen non-melt, tacky, and water resistant. Extremely low pour point, extremely high temperature oxidation, and thermal stability produce a grease that is unmatched in performance.



Abrasive Discs

- T34037—Ceramic Abrasive Disc, 120 Grit
- T34038—Ceramic Abrasive Disc, 60 Grit
- T34039—Zirconium Deburring Disc, 120 Grit
- T34040—A/O Deburring Disc, SR, 150 Grit
- T34041—S/C Deburring Disc, SR, 150 Grit
- T34042—A/O Deburring Disc, SR, 40 Grit
- T34043—S/C Deburring Disc, SR, 40 Grit
- T34044—Zirconium Deburring, SR, 60 Grit
- T34045—A/O Deburring Disc, SR, 80 Grit
- T34046—S/C Deburring Disc, SR, 80 Grit
- T34047—A/O Deburring Disc, DR, 150 Grit
- T34048—A/O Deburring Disc, DR, 40 Grit
- T34049—A/O Deburring Disc, DR, 80 Grit
- T34050—S/C Deburring, DR Hero, 150 Grit
- T34051—S/C Deburring, DR Hero, 40 Grit
- T34052—S/C Deburring, DR Hero, 80 Grit
- T34053—Ceramic Deburr, DR Hero, 120 Grit
- T34054—Zirconium Deburr, DR Hero, 120 Grit
- T34055—Ceramic Deburr, DR Hero, 60 Grit
- T34056—Zirconium Deburr, DR Hero, 60 Grit
- T34057—Deslagging Brush 155
- T34058—Oxide Brush 155 Cordwire
- T34059—Hook-and-Loop Disc 155 Hard
- T34060—Hook-and-Loop Disc 155 Medium
- T34061—A/O Surface Conditioning, 180 Grit

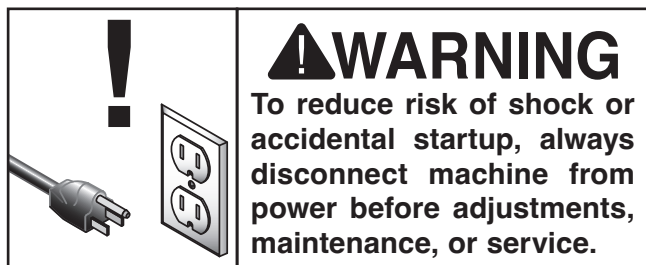
When it comes to pre-grinding sheet metal workpieces, performing light deburring, and achieving a flawless finish, look no further than our many discs, brushes, and hook-and-loop systems available for the Model G0974.



order online at www.grizzly.com or call 1-800-523-4777



MAINTENANCE



Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

Ongoing

To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the items below, and fix the problem before continuing operations:

- Fire hazards/smoldering metal dust.
- Loose fasteners or components.
- Damaged or worn abrasive discs.
- Damaged or worn air filter or seals.
- Damaged or worn wires.
- Any other unsafe condition.

Daily

- Clean/vacuum dust buildup off machine body.

Monthly

- Clean and lubricate machine components (**Page 33**).
- Clean vacuum chamber (**Page 35**).
- Clean air filter (**Page 34**).
- Clean dust buildup from machine interior and off vacuum pump.
- Inspect/clean interior ducts and fittings.

Cleaning & Protecting

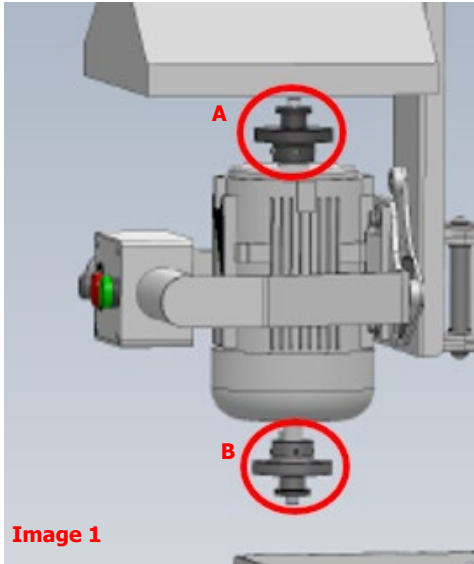
! WARNING

Always wear ANSI-approved safety goggles, NIOSH-approved respirator, and protective gloves when removing, cleaning, and replacing components. Carefully minimize the amount of dust that becomes airborne, and prevent the spread of dust onto hands or clothing. Properly dispose of all waste according to local regulations for material type.

Cleaning the Model G0974 is relatively easy. Use a soft bristle brush and shop vacuum with a HEPA filter, then wipe off remaining dust with a cloth dampened with water.



Lubrication

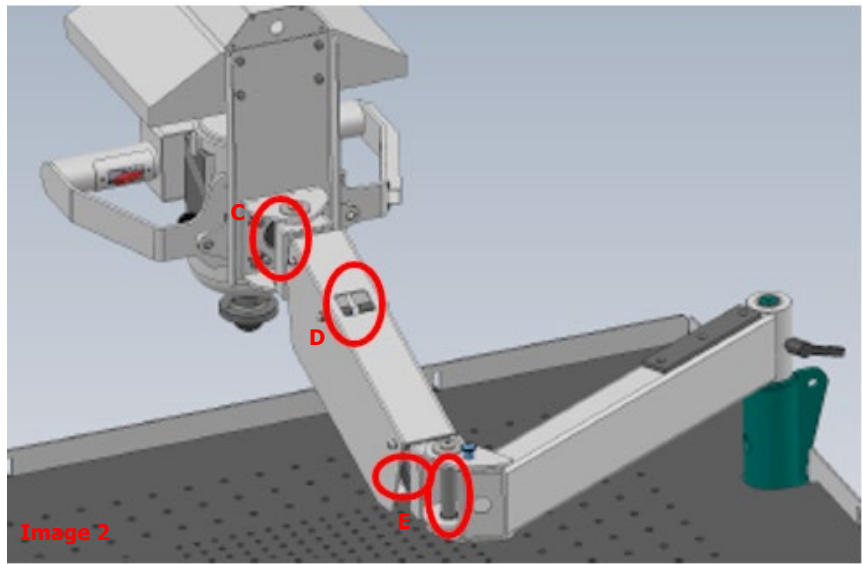


Disc Holder (circled on A and B of Image 1)

Lubricant Type: General-purpose mechanical grease.

Lubricant Amount: Approximately 5 ml.

Lubrication Frequency: Once a month.



Rotary Joints and Bearings (circled on C of Image 2)

Lubricant Type: General-purpose mechanical grease.

Lubricant Amount: Approximately 3 ml.

Lubrication Frequency: Once a month.

Linkage Joints (circled on D of Image 2)

Lubricant Type: General-purpose mechanical grease.

Lubricant Amount: Approximately 2 ml.

Lubrication Frequency: Once a week.

Support Bearings and Slides (circled on E of Image 2)

Lubricant Type: General-purpose mechanical grease.

Lubricant Amount: Approximately 5 ml.

Lubrication Frequency: Once a month.

Additional Notes:

Ensure the machine is turned *OFF* and disconnected from power before performing any lubrication.

Clean each lubrication point before applying grease to prevent dirt and impurities from entering. Excessive lubrication can lead to performance degradation or spillage; adhere to the recommended lubricant amounts. After lubrication, check for any abnormal leaks or sounds.

Maintenance Records:

Log the date, time, and amount of lubricant used for each lubrication event to track the lubrication history and plan future maintenance.



SERVICE

Cleaning Air Filter

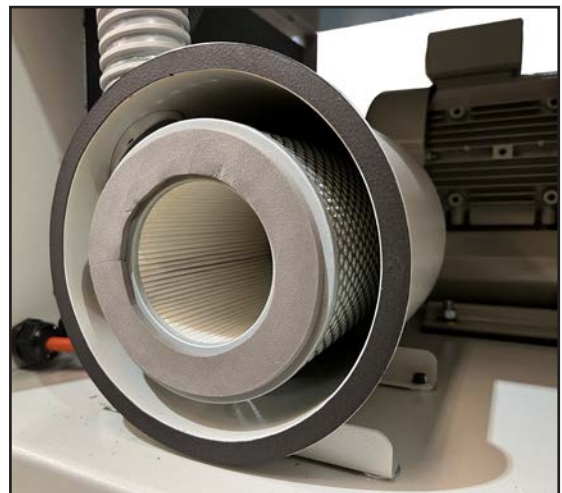
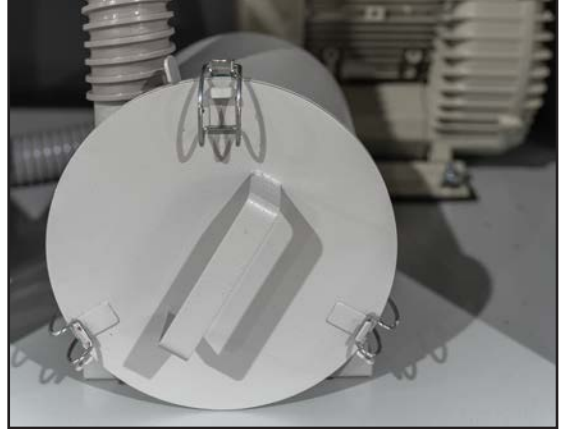
WARNING

Under certain conditions, residual metal particles and chips may continue to smolder long after igniting. To help prevent vacuum container from smoldering and possibly catching fire, incorporate these safety steps in the cleanup schedule:

- After machine use, wait for a period of time to allow any smoldering embers to naturally expire.
- Immediately empty and dispose of collected waste in a steel container.
- Use a vacuum with a steel drum, and avoid using vacuums with paper bags or existing combustible material.

The G0974 is fitted with a filter between the vacuum pump and the inlet. This ensures that large dust particles are captured before they enter the pump, thus extending the life of the pump.

1. DISCONNECT MACHINE FROM POWER!
2. Open access door on right side of machine.
3. Release (3) clips on cover and remove cover.
4. Remove filter from filter housing.
5. Take filter outside or find a place that has good ventilation, then clean filter with compressed air.
6. Once clean, place filter back into filter housing and replace cover.



Cleaning Vacuum Chamber

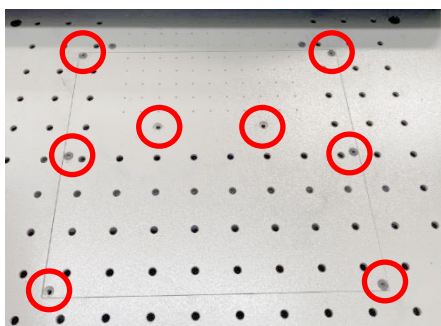
Dust particles can be explosive, so cleaning the vacuum chamber is important.

If your machine has been used for grinding a light metal, **DO NOT** grind ferrous material (steel). The residual light metal dust could be ignited by sparks and explode. **DO NOT** grind mixed materials in your machine. The machine, ductwork and collector **MUST** be thoroughly cleaned before switching material.

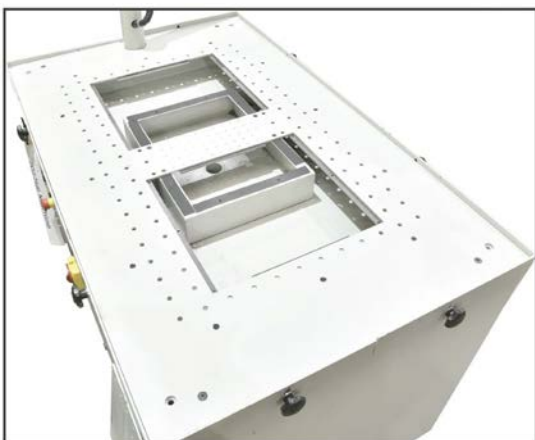
1. Carefully roll up the table mat and set aside.



2. Loosen the screws circled below and open (2) covers, one on each side of the table.



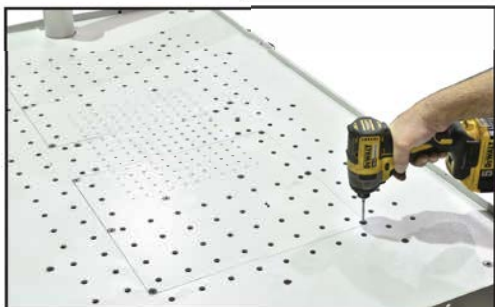
3. Once the covers have been removed, clean the vacuum chamber.



WARNING

If materials that produce toxic dust or chips are processed with this machine, verify that a MERV 15+ or HEPA filter is installed in your vacuum. Hazardous particles can quickly spread through enclosed areas when expelled from a vacuum.

4. Replace the covers and secure them with the screws. Place the rubber mat on the table once the cleaning task is completed.



WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance **BEFORE** making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

WARNING

Wiring Safety Instructions

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

MODIFICATIONS. Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved after-market parts.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

CIRCUIT REQUIREMENTS. You **MUST** follow the requirements at the beginning of this manual when connecting your machine to a power source.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

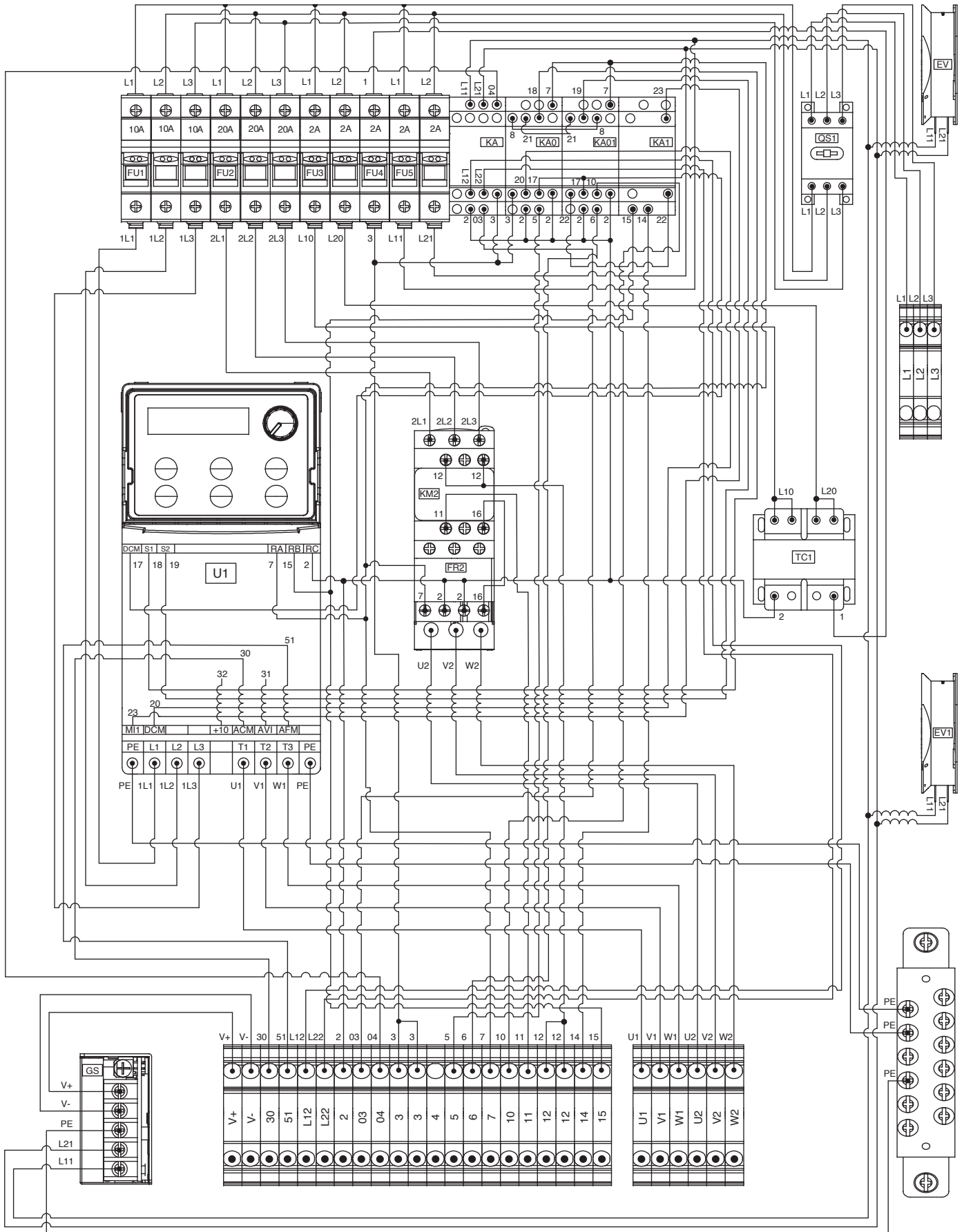
MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

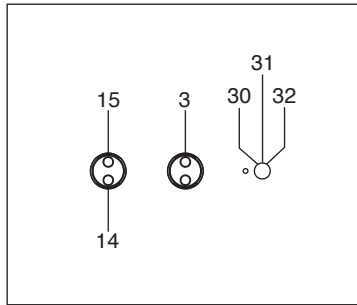


Wiring Diagram

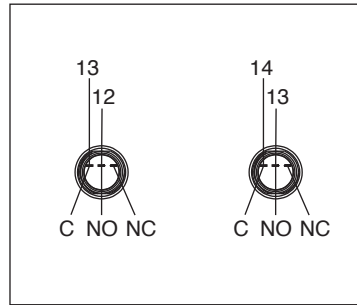


Control System Diagram

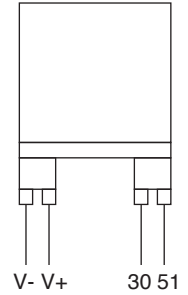
Spindle Control Box



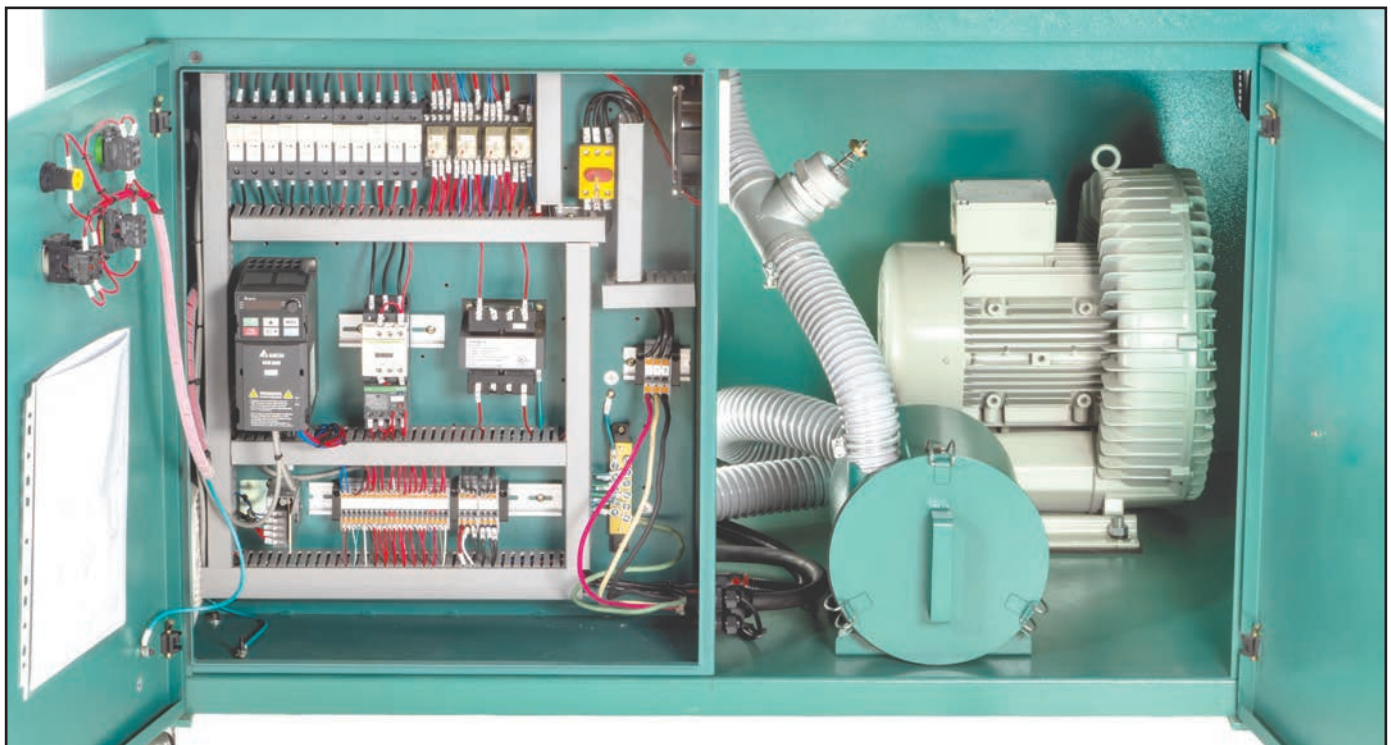
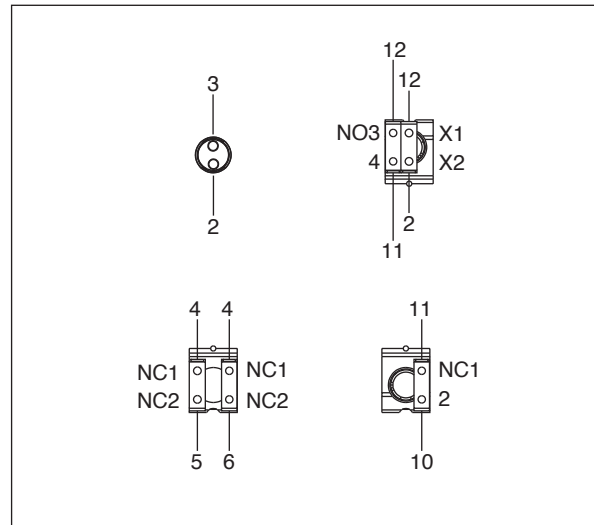
Spindle Start Buttons



RPM Digital Readout



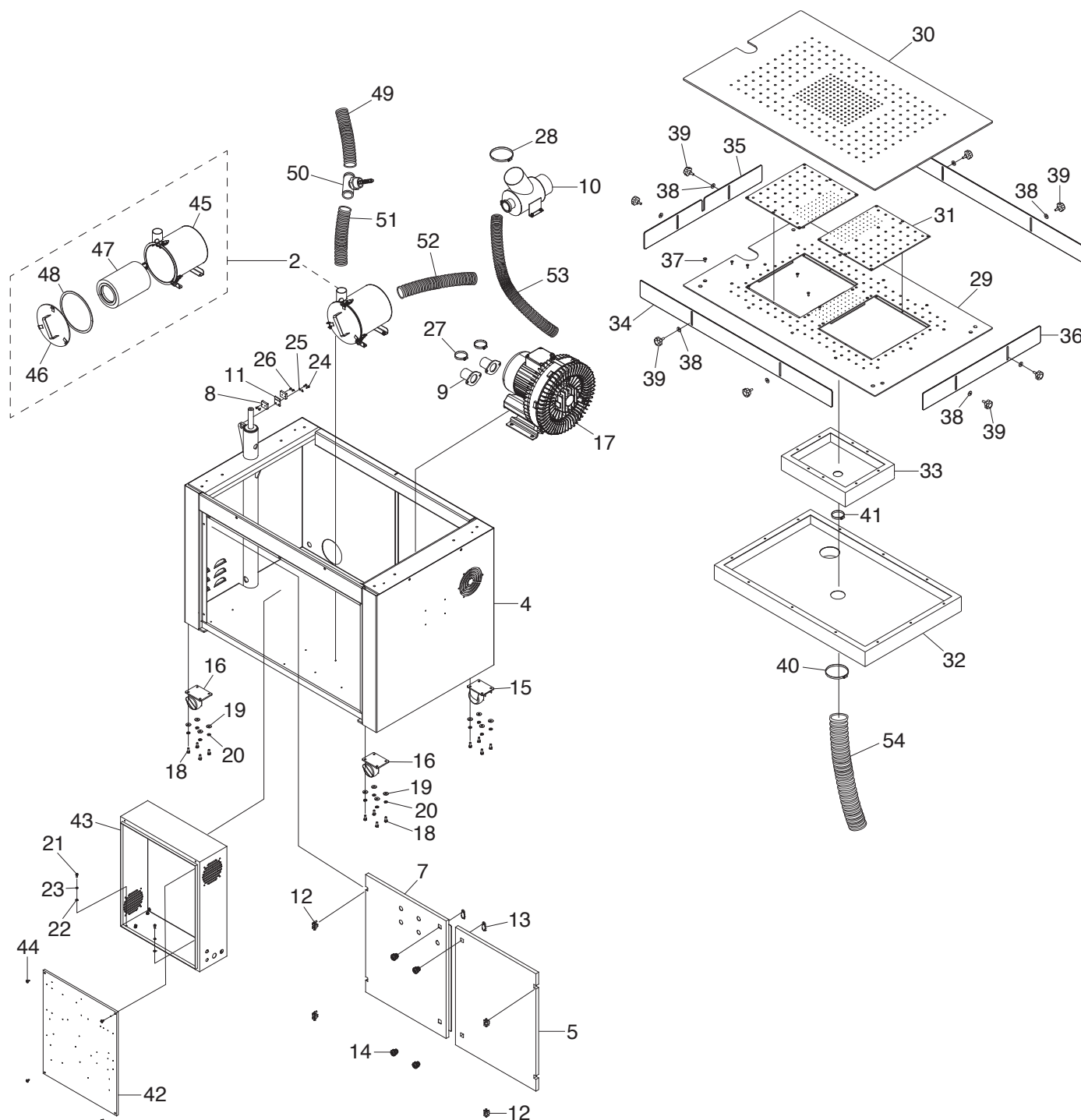
Electrical Control Box (Door Panel)



PARTS

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call **(800) 523-4777** or visit **www.grizzly.com/parts** to check for availability.

Main



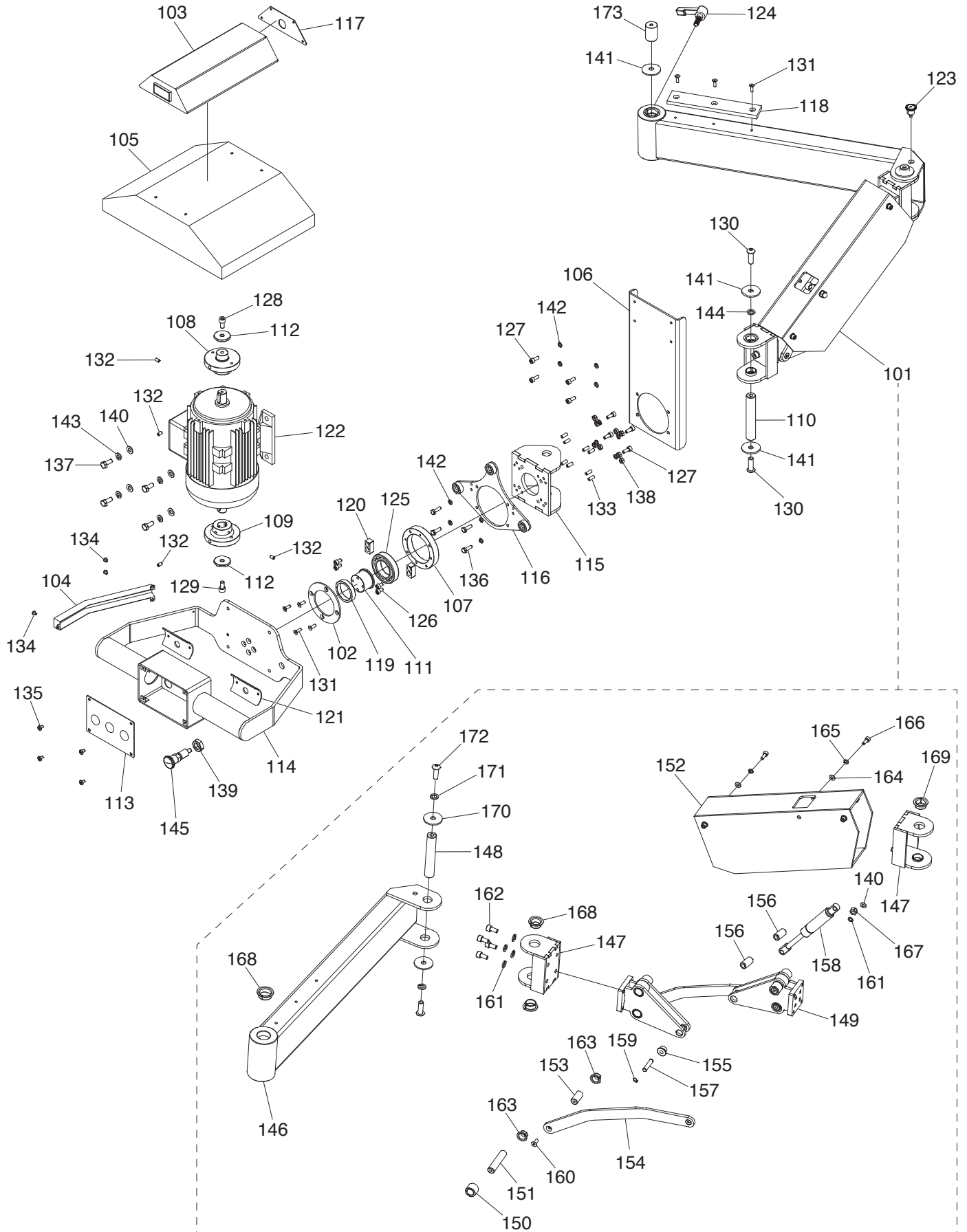
Main Parts List

REF	PART #	DESCRIPTION
2	P0974002	AIR FILTER ASSEMBLY
4	P0974004	MACHINE FRAME
5	P0974005	CABINET DOOR, RIGHT
7	P0974007	CABINET DOOR, LEFT
8	P0974008	BUMPER BLOCK, RUBBER
9	P0974009	VACUUM PUMP FITTING
10	P0974010	Y-FITTING 2" X 4" X 5"
11	P0974011	BUMPER BLOCK LOCK PLATE
12	P0974012	DOOR HINGE
13	P0974013	DOOR CAMLOCK
14	P0974014	DOOR LOCK
15	P0974015	SWIVEL CASTER 3"
16	P0974016	SWIVEL CASTER W/BRAKE 3"
17	P0974017	VACUUM PUMP 3HP 240V/480V 3-PH
18	P0974018	HEX BOLT M8-1.25 X 20
19	P0974019	FLAT WASHER 8MM
20	P0974020	LOCK WASHER 8MM
21	P0974021	CAP SCREW M6-1 X 12
22	P0974022	FLAT WASHER 6MM
23	P0974023	LOCK WASHER 6MM
24	P0974024	CAP SCREW M5-.8 X 12
25	P0974025	FLAT WASHER 5MM
26	P0974026	FLAT HD CAP SCR M4-.7 X 8
27	P0974027	HOSE CLAMP 2-1/2"
28	P0974028	HOSE CLAMP 5"
29	P0974029	TABLE

REF	PART #	DESCRIPTION
30	P0974030	TABLE MAT 800 X 1300MM, RED
31	P0974031	VACUUM CHAMBER COVER PLATE
32	P0974032	TABLE BASE
33	P0974033	VACUUM CHAMBER
34	P0974034	TABLE GUARD, FRONT/REAR
35	P0974035	TABLE GUARD, LEFT
36	P0974036	TABLE GUARD, RIGHT
37	P0974037	FLAT HD CAP SCR M6-1 X 16
38	P0974038	FLAT WASHER 8MM
39	P0974039	KNOB BOLT M8-1.25 X 20
40	P0974040	HOSE CLAMP 4-1/4"
41	P0974041	HOSE CLAMP 2-1/2"
42	P0974042	ELECTRICAL MOUNTING BOARD
43	P0974043	ELECTRICAL CONTROL BOX
44	P0974044	PHLP HD SCR M6-1 X 10
45	P0974045	FILTER HOUSING
46	P0974046	FILTER HOUSING COVER
47	P0974047	AIR FILTER
48	P0974048	SEALING FOAM 2 X 220MM
49	P0974049	VACUUM HOSE 2" X 18"
50	P0974050	PRESSURE RELIEF VALVE
51	P0974051	VACUUM HOSE 2" X 12"
52	P0974052	VACUUM HOSE 2" X 23"
53	P0974053	VACUUM HOSE 2" X 37.5"
54	P0974054	VACUUM HOSE 4" X 26"



Cantilever & Motor



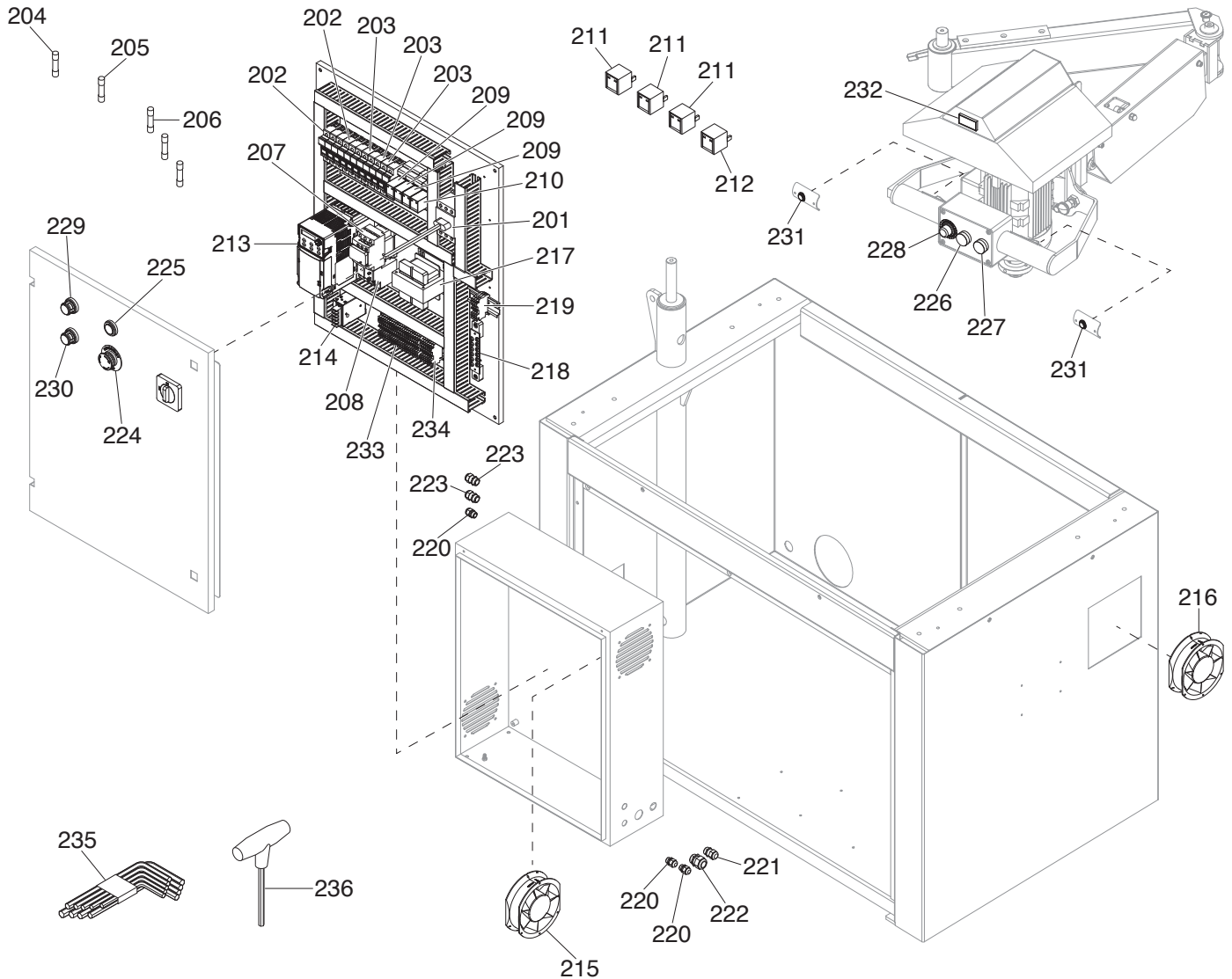
Cantilever & Motor Parts List

REF	PART #	DESCRIPTION
101	P0974101	CANTILEVER ARM ASSEMBLY
102	P0974102	BEARING COVER PLATE
103	P0974103	DIGITAL READOUT HOUSING
104	P0974104	CABLE GUARD
105	P0974105	GRINDING GUARD
106	P0974106	MOTOR MOUNT
107	P0974107	MAIN BEARING COVER
108	P0974108	DISC HOLDER (RH THREAD)
109	P0974109	DISC HOLDER (LH THREAD)
110	P0974110	STANDOFF-ROUND FF M10-1.5, 112L
111	P0974111	GRINDING HEAD SPINDLE
112	P0974112	FENDER WASHER 8 X 35 X 3MM
113	P0974113	HEAD CONTROL PANEL
114	P0974114	HEAD CONTROL HANDLE
115	P0974115	U-BRACKET MOUNT
116	P0974116	HEAD POSITIONING PLATE
117	P0974117	DIGITAL READOUT COVER
118	P0974118	BUMPER PAD, RUBBER
119	P0974119	SPACER 40.2 X 50 X 10
120	P0974120	POSITIONING BLOCK
121	P0974121	START BUTTON COVER
122	P0974122	MOTOR 1HP 220/380V 3-PH
123	P0974123	INDEXING PLUNGER
124	P0974124	ADJUSTABLE HANDLE M8-1.25 X 25
125	P0974125	BALL BEARING 6008-2RS
126	P0974126	CAP SCREW M6-1 X 10
127	P0974127	CAP SCREW M6-1 X 16
128	P0974128	CAP SCREW M8-1.25 X 12
129	P0974129	CAP SCREW M8-1.25 X 16 LH
130	P0974130	BUTTON HD CAP SCR M10-1.5 X 30
131	P0974131	FLAT HD CAP SCR M5-.8 X 16
132	P0974132	SET SCREW M6-1 X 10
133	P0974133	SET SCREW M6-1 X 16
134	P0974134	PHLP HD SCR M4-.7 X 6
135	P0974135	PHLP HD SCR M5-.8 X 8
136	P0974136	HEX BOLT M6-1 X 20
137	P0974137	HEX BOLT M8-1.25 X 20

REF	PART #	DESCRIPTION
138	P0974138	HEX NUT M6-1
139	P0974139	HEX NUT M16-1.5
140	P0974140	FLAT WASHER 8MM
141	P0974141	FENDER WASHER 10MM
142	P0974142	LOCK WASHER 6MM
143	P0974143	LOCK WASHER 8MM
144	P0974144	LOCK WASHER 10MM
145	P0974145	INDEXING PLUNGER M8-1.25 X 12
146	P0974146	CANTILEVER ARM
147	P0974147	CANTILEVER U-BRACKET
148	P0974148	STANDOFF-ROUND FF M10-1.5, 112L
149	P0974149	LIFTING BRAKE BRACKET
150	P0974150	BUSHING 15ID X 22OD X 18L
151	P0974151	STANDOFF-ROUND FF M6-1, 67L
152	P0974152	CANTILEVER COVER
153	P0974153	STANDOFF-ROUND FF M6-1, 31L
154	P0974154	CANTILEVER BRACKET
155	P0974155	FLANGED SLEEVE BEARING 15MM
156	P0974156	BUSHING 8 X 15 X 27.5MM
157	P0974157	DOWEL PIN 8 X 37
158	P0974158	GAS SPRING TSB3-250-L3-800N
159	P0974159	EXT RETAINING RING 8MM
160	P0974160	FLAT HD CAP SCR M6-1 X 16
161	P0974161	LOCK WASHER 8MM
162	P0974162	CAP SCREW M8-1.25 X 12
163	P0974163	FLANGED SLEEVE BEARING 15MM
164	P0974164	FLAT WASHER 6MM
165	P0974165	LOCK WASHER 6MM
166	P0974166	CAP SCREW M6-1 X 16
167	P0974167	ACORN NUT M8-1.25
168	P0974168	FLANGED SLEEVE BEARING 25MM
169	P0974169	FLANGED SLEEVE BEARING 20MM
170	P0974170	FENDER WASHER 10MM
171	P0974171	LOCK WASHER 10MM
172	P0974172	CAP SCREW M10-1.5 X 30
173	P0974173	BUMPER 10.5 X 20 X 30MM, RUBBER



Electrical & Accessories



REF PART # DESCRIPTION

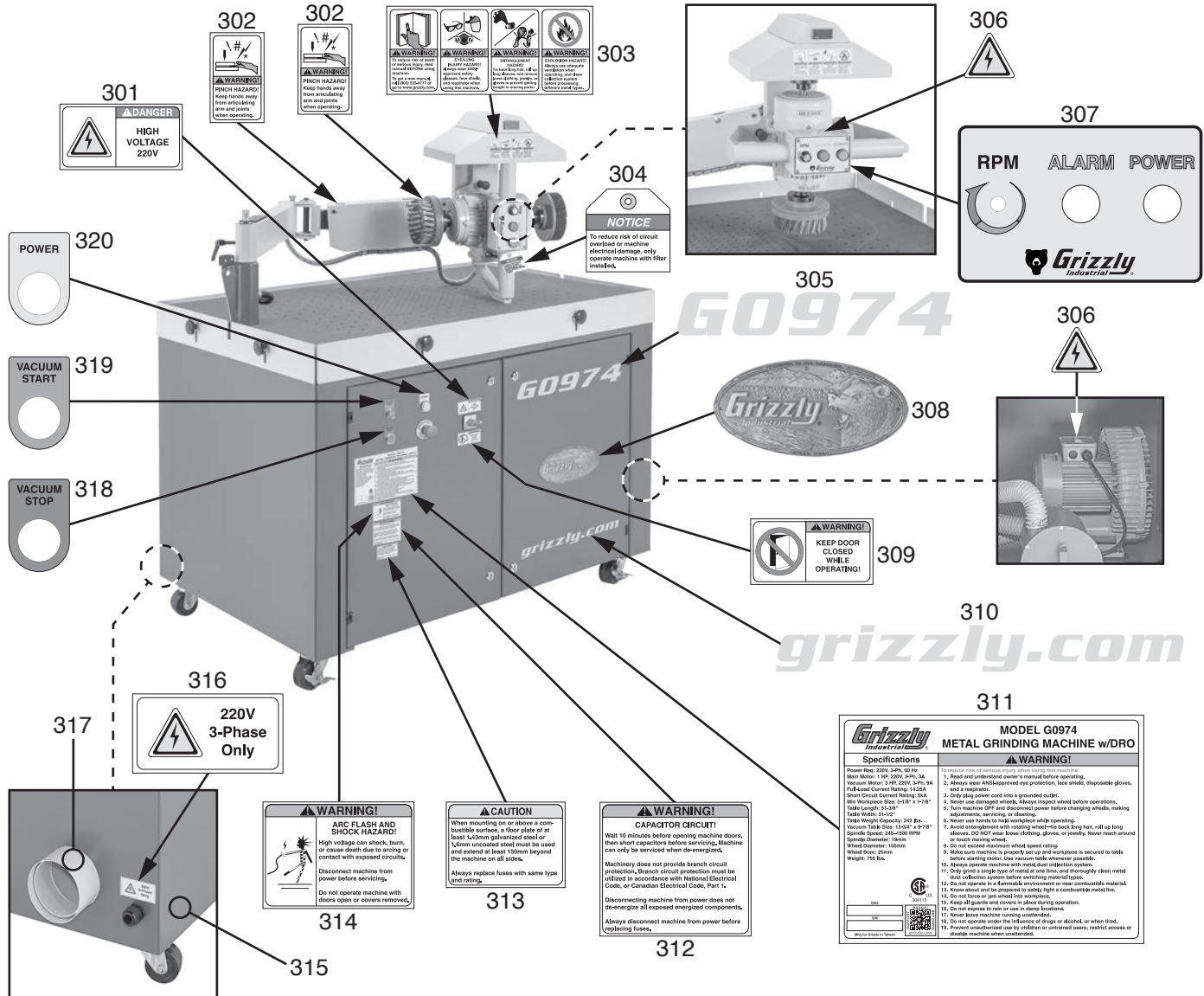
201	P0974201	SWITCH DISCONNECT NHD NDS-303-G4DL2
202	P0974202	FUSE CARRIER SCHNEIDER DF103 3P 690V
203	P0974203	FUSE CARRIER SCHNEIDER DF102 2P 690V
204	P0974204	FUSE 10A 600V 0.4" FAST-ACTING, CERAMIC
205	P0974205	FUSE 20A 600V 0.4" TIME-DELAY, CERAMIC
206	P0974206	FUSE 2A 600V 0.4" FAST-ACTING, CERAMIC
207	P0974207	CONTACTOR SCHNEIDER LC1D12 220V
208	P0974208	OVERLOAD RELAY LR3D16 9-13A
209	P0974209	RELAY SOCKET IDEC SU4S-21L 300V 8A
210	P0974210	RELAY SOCKET IDEC SU2S-21L 300V 12A
211	P0974211	RELAY IDEC RN4S-HNL-A24 3A 250V
212	P0974212	RELAY IDEC RN2S-HNL-A24 5A 250V
213	P0974213	VFD DELTA VFD7A5MS23ANSAA
214	P0974214	POWER SUPPLY MEANWELL RS-15-24
215	P0974215	COOLING FAN KA1238HA2SAT
216	P0974216	COOLING FAN KA1725HA2BAT
217	P0974217	TRANSFORMER 100240480-24 480VAC
218	P0974218	GROUNDING BLOCK CP9-9P

REF PART # DESCRIPTION

219	P0974219	TERMINAL BAR 6P DIN35 10-16G
220	P0974220	STRAIN RELIEF PG9
221	P0974221	STRAIN RELIEF 18MM
222	P0974222	STRAIN RELIEF 1/2"
223	P0974223	STRAIN RELIEF PG13.5
224	P0974224	EMERGENCY STOP BUTTON 3SU1100-1HB20-1PA0
225	P0974225	INDICATOR LIGHT KEYON KE-22DS-W
226	P0974226	INDICATOR LIGHT KEYON KE-22DS-R
227	P0974227	INDICATOR LIGHT KEYON KE-22DS-G
228	P0974228	POTENTIOMETER W/DIAL J2060002
229	P0974229	START BUTTON SCHNEIDER ZB5-AW33, VACUUM
230	P0974230	STOP BUTTON SCHNEIDER ZB5-AA4, VACUUM
231	P0974231	START BUTTON DAILYWELL MPB19, SPINDLE
232	P0974232	DIGITAL READOUT SA-40KVD
233	P0974233	TERMINAL BAR 42P DIN35 16-22G
234	P0974234	TERMINAL BAR 12P DIN35 16-22G
235	P0974235	HEX WRENCH SET 1.5-10MM
236	P0974236	T-HANDLE HEX WRENCH 6MM



Labels & Cosmetics



REF	PART #	DESCRIPTION
301	P0974301	220V HIGH VOLTAGE LABEL
302	P0974302	PINCH HAZARD LABEL
303	P0974303	COMBO WARNING LABEL
304	P0974304	HANGING TAG NOTICE
305	P0974305	MODEL NUMBER LABEL
306	P0974306	ELECTRICITY LABEL
307	P0974307	CONTROL PANEL LABEL
308	P0974308	GRIZZLY NAMEPLATE, SMALL
309	P0974309	KEEP DOOR CLOSED LABEL
310	P0974310	GRIZZLY.COM LABEL 16", BEIGE

REF	PART #	DESCRIPTION
311	P0974311	MACHINE ID LABEL
312	P0974312	CAPACITOR CIRCUIT LABEL
313	P0974313	FLOOR AND FUSES LABEL
314	P0974314	SHOCK HAZARD LABEL
315	P0974315	TOUCH-UP PAINT, GRIZZLY GREEN
316	P0974316	220V 3-PHASE ELECTRICITY LABEL
317	P0974317	TOUCH-UP PAINT, GREY PUTTY
318	P0974318	VACUUM STOP LABEL
319	P0974319	VACUUM START LABEL
320	P0974320	POWER LIGHT LABEL

⚠ WARNING

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or www.grizzly.com.



WARRANTY & RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

In the event you need to use this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

For further information about the warranty, visit <https://www.grizzly.com/forms/warranty> or scan the QR code below to be automatically directed to our warranty page.





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