



# OPERATOR'S MANUAL



## **BELT GRINDER MODEL: BG-248-3**

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## THANK YOU & WARRANTY

Thank you for your purchase of a machine from Baileigh Industrial. We hope that you find it productive and useful to you for a long time to come.

**Inspection & Acceptance.** Buyer shall inspect all Goods within ten (10) days after receipt thereof. Buyer's payment shall constitute final acceptance of the Goods and shall act as a waiver of the Buyer's rights to inspect or reject the goods unless otherwise agreed. If Buyer rejects any merchandise, Buyer must first obtain a Returned Goods Authorization ("RGA") number before returning any goods to Seller. Goods returned without a RGA will be refused. Seller will not be responsible for any freight costs, damages to goods, or any other costs or liabilities pertaining to goods returned without a RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

**Specifications.** Seller may, at its option, make changes in the designs, specifications or components of the Goods to improve the safety of such Goods, or if in Seller's judgment, such changes will be beneficial to their operation or use. Buyer may not make any changes in the specifications for the Goods unless Seller approves of such changes in writing, in which event Seller may impose additional charges to implement such changes.

**Limited Warranty.** Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain a RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without a RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 30 days from date of receipt. The foregoing warranty is Seller's sole obligation, and the original end-user's exclusive remedy, with regard to any defective Goods. This limited warranty does not apply to: (a) die sets, tooling, and saw blades; (b) periodic or routine maintenance and setup, (c) repair or replacement of the Goods due to normal wear and tear, (d) defects or damage to the Goods resulting from misuse, abuse, neglect, or accidents, (e) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

**EXCLUSION OF OTHER WARRANTIES.** THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY AND ALL OTHER EXPRESS, STATUTORY OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. NO WARRANTY IS MADE WHICH EXTENDS BEYOND THAT WHICH IS EXPRESSLY CONTAINED HEREIN.

**Limitation of Liability.** IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR DOWN TIME) ARISING FROM OR IN MANNER CONNECTED WITH THE GOODS, ANY BREACH BY SELLER OR ITS AGENTS OF THIS AGREEMENT, OR ANY OTHER CAUSE WHATSOEVER, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY. BUYER'S REMEDY WITH RESPECT TO ANY CLAIM ARISING UNDER THIS AGREEMENT IS STRICTLY LIMITED TO NO MORE THAN THE AMOUNT PAID BY THE BUYER FOR THE GOODS.



**Force Majeure.** Seller shall not be responsible for any delay in the delivery of, or failure to deliver, Goods due to causes beyond Seller's reasonable control including, without limitation, acts of God, acts of war or terrorism, enemy actions, hostilities, strikes, labor difficulties, embargoes, non-delivery or late delivery of materials, parts and equipment or transportation delays not caused by the fault of Seller, delays caused by civil authorities, governmental regulations or orders, fire, lightening, natural disasters or any other cause beyond Seller's reasonable control. In the event of any such delay, performance will be postponed by such length of time as may be reasonably necessary to compensate for the delay.

**Installation.** If Buyer purchases any Goods that require installation, Buyer shall, at its expense, make all arrangements and connections necessary to install and operate the Goods. Buyer shall install the Goods in accordance with any Seller instructions and shall indemnify Seller against any and all damages, demands, suits, causes of action, claims and expenses (including actual attorneys' fees and costs) arising directly or indirectly out of Buyer's failure to properly install the Goods.

**Work By Others; Safety Devices.** Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation or provision of Goods. Buyer is solely responsible for furnishing, and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operator's manuals, ANSI or comparable safety standards, OSHA regulations and other sources of safety standards and regulations applicable to the use and operation of the Goods.

**Remedies.** Each of the rights and remedies of Seller under this Agreement is cumulative and in addition to any other or further remedies provided under this Agreement or at law or equity.

**Attorney's Fees.** In the event legal action is necessary to recover monies due from Buyer or to enforce any provision of this Agreement, Buyer shall be liable to Seller for all costs and expenses associated therewith, including Seller's actual attorneys' fees and costs.

**Governing Law/Venue.** This Agreement shall be construed and governed under the laws of the State of Wisconsin, without application of conflict of law principles. Each party agrees that all actions or proceedings arising out of or in connection with this Agreement shall be commenced, tried, and litigated only in the state courts sitting in Manitowoc County, Wisconsin or the U.S. Federal Court for the Eastern District of Wisconsin. Each party waives any right it may have to assert the doctrine of "forum non conveniens" or to object to venue to the extent that any proceeding is brought in accordance with this section. Each party consents to and waives any objection to the exercise of personal jurisdiction over it by courts described in this section. Each party waives to the fullest extent permitted by applicable law the right to a trial by jury.

**Summary of Return Policy.**

- 10 Day acceptance period from date of delivery. Damage claims and order discrepancies will not be accepted after this time.
- You must obtain a Baileigh issued RGA number PRIOR to returning any materials.
- Returned materials must be received at Baileigh in new condition and in original packaging.
- Altered items are not eligible for return.
- Buyer is responsible for all shipping charges.
- A 30% re-stocking fee applies to all returns.

Baileigh Industrial makes every effort to ensure that our posted specifications, images, pricing and product availability are as correct and timely as possible. We apologize for any discrepancies that may occur. Baileigh Industrial reserves the right to make any and all changes deemed necessary in the course of business including but not limited to pricing, product specifications, quantities, and product availability.

**For Customer Service & Technical Support:**

Please contact one of our knowledgeable Sales and Service team members at:  
(920) 684-4990 or e-mail us at [sales@baileigh.com](mailto:sales@baileigh.com)



## **INTRODUCTION**

*The quality and reliability of the components assembled on a Baileigh Industrial machine guarantee near perfect functioning, free from problems, even under the most demanding working conditions. However if a situation arises, refer to the manual first. If a solution cannot be found, contact the distributor where you purchased our product. Make sure you have the serial number and production year of the machine (stamped on the nameplate). For replacement parts refer to the assembly numbers on the parts list drawings.*

*Our technical staff will do their best to help you get your machine back in working order.*

### **In this manual you will find: (when applicable)**

- Safety procedures
- Correct installation guidelines
- Description of the functional parts of the machine
- Capacity charts
- Set-up and start-up instructions
- Machine operation
- Scheduled maintenance
- Parts lists

## **GENERAL NOTES**

After receiving your equipment remove the protective container. Do a complete visual inspection, and if damage is noted, **photograph it for insurance claims** and contact your carrier at once, requesting inspection. Also contact Baileigh Industrial and inform them of the unexpected occurrence. Temporarily suspend installation.

Take necessary precautions while loading / unloading or moving the machine to avoid any injuries.

Your machine is designed and manufactured to work smoothly and efficiently. Following proper maintenance instructions will help ensure this. Try and use original spare parts, whenever possible, and most importantly; **DO NOT** overload the machine or make any unauthorized modifications.

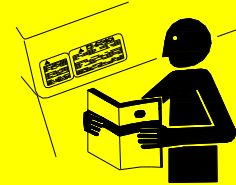


**Note:** This symbol refers to useful information throughout the manual.



## **IMPORTANT** **PLEASE READ THIS OPERATORS MANUAL CAREFULLY**

It contains important safety information, instructions, and necessary operating procedures. The continual observance of these procedures will help increase your production and extend the life of the equipment.



## **SAFETY INSTRUCTIONS**

### **LEARN TO RECOGNIZE SAFETY INFORMATION**

This is the safety alert symbol. When you see this symbol on your machine or in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**



Follow recommended precautions and safe operating practices.

### **UNDERSTAND SIGNAL WORDS**

A signal word – **DANGER**, **WARNING**, or **CAUTION** is used with the safety alert symbol. **DANGER** identifies a hazard or unsafe practice that will result in severe **Injury or Death.**



Safety signs with signal word **DANGER** or **WARNING** are typically near specific hazards.



General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.



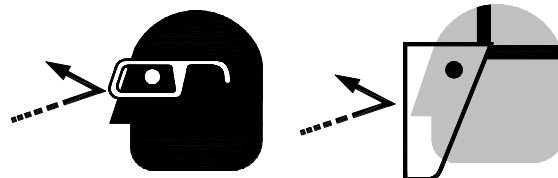


**SAVE THESE INSTRUCTIONS.**  
**Refer to them often and use them to instruct others.**



**PROTECT EYES**

Wear safety glasses or suitable eye protection when working on or around machinery.



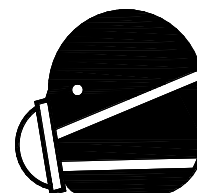
**PROTECT AGAINST NOISE**

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



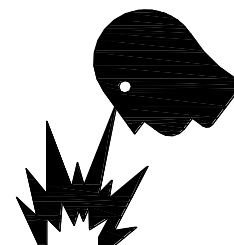
**DUST HAZARD**

Wear appropriate dust mask. Dust created while using machinery can cause cancer, birth defects, and long term respiratory damage. Be aware of the dust hazards associated with all types of materials.



**DUST PARTICLES AND IGNITION SOURCES**

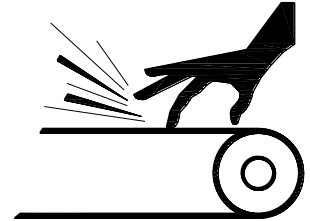
**DO NOT** operate the grinder in areas where explosion risks are high. Such areas include locations near pilot lights, open flames, or other ignition sources.





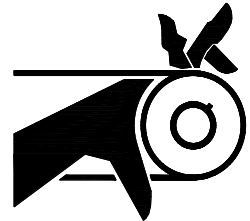
### MOVING BELT ABRASIONS

**DO NOT** place hands or fingers near, or in contact with sanding belt during operation.



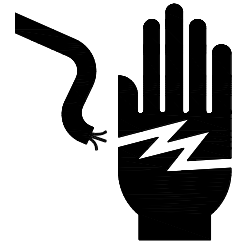
### MOVING BELTS CAN CRUSH AND DISMEMBER

**DO NOT** allow fingers to get pinched between belt and belt rollers. This may pull the operator's hand into the machine causing serious personal injury. **DO NOT** operate without guards in place.



### HIGH VOLTAGE

**USE CAUTION IN HIGH VOLTAGE AREAS. DO NOT** assume the power to be off.  
**FOLLOW PROPER LOCKOUT PROCEDURES.**



### Power Switch with Lock Out

In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the Power Switch paddle downward. Remove the yellow lock key to prevent the machine from starting.



**Note:** Resetting the Power Switch WILL start the machine.







## SAFETY PRECAUTIONS



Metal working can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

Safety equipment such as guards, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. **Always use common sense** and exercise **caution** in the workshop. If a procedure feels dangerous, don't try it.

**REMEMBER: Your personal safety is your responsibility.**



**WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY**

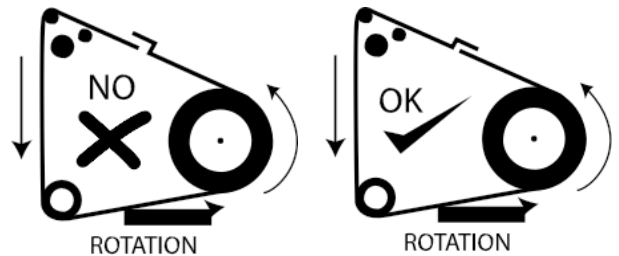
1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learn the machine's application and limitations as well as the specific hazards.
2. **Only trained and qualified personnel can operate this machine.**
3. **Make sure guards are in place and in proper working order before operating machinery.**
4. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
5. **Keep work area clean.** Cluttered areas invite injuries.
6. **Overloading machine.** By overloading the machine you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
7. **Dressing material edges.** Always chamfer and deburr all sharp edges.
8. **Do not force tool.** Your machine will do a better and safer job if used as intended. **DO NOT** use inappropriate attachments in an attempt to exceed the machines rated capacity.
9. **Use the right tool for the job. DO NOT** attempt to force a small tool or attachment to do the work of a large industrial tool. **DO NOT** use a tool for a purpose for which it was not intended.
10. **Dress appropriate. DO NOT** wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.



11. **Use eye and ear protection.** Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
12. **Do not overreach.** Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
13. **Stay alert.** Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
14. **Check for damaged parts.** Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
15. **Observe work area conditions.** **DO NOT** use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. **DO NOT** use electrically powered tools in the presence of flammable gases or liquids.
16. **Keep children away.** Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
17. **Store idle equipment.** When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
18. **DO NOT operate machine if under the influence of alcohol or drugs.** Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.
19. **Sparks and hot material** from cutting can easily go through small cracks and openings into adjacent areas. **Do not** grind where the atmosphere might contain flammable dust, gas, or liquid vapors such as from gasoline.
20. Watch for fire and keep a fire extinguisher close by.
21. **Turn off** power before checking, cleaning, or replacing any parts.
22. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
23. Keep **all** cords dry, free from grease and oil, and protected from sparks and hot metal.
24. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill! DO NOT** touch live electrical components or parts.
25. **DO NOT** bypass or defeat any safety interlock systems.
26. Keep visitors a safe distance from the work area.
27. **Never leave machine running unattended. TURN POWER OFF.** Don't leave machine until it comes to a complete stop.
28. **Minimum Stock Dimensions.** **DO NOT** sand material thinner than 1/16" (1.5mm), narrower than 1/8" (3mm), or shorter than 8" (203mm).
29. **Changing Sanding Belt.** **DO NOT** operate the sander if the belt is damaged or badly worn. Replace at once.



30. **Inspect Piece Part.** Always inspect piece part for staples, nails, knots, or other imperfections that could become projectiles causing personal injury.
31. **Correctly Feeding The Stock.** Grasp the piece part firmly with both hands and ease into the belt with light pressure. **NEVER** force the piece part into the belt. **DO NOT** sand tapered or pointed stock with the point facing into the feed direction of the belt. **NEVER** sand more than one piece of stock at a time.
32. **Avoid Contact With The Belt.** The abrasive belt when running is an aggressive cutting tool. Extra care should be exercised when using coarse grit belts due to their rapid cutting action.
33. Bolt this grinder securely to the stand ensuring that the stand is bolted to a stable surface to stop it from tipping over or moving when in use.
34. **Sharpen Cutting Tools In Proper Direction.** Always sharpen cutting tools especially knives, scissors, chisels, etc. with the cutting edge facing downwards and in the direction of rotation of the belt. **NEVER** face the cutting edge upward against the rotation of the belt; this can result in injury.
35. **Hold Material Tightly.** Always hold the work piece firmly when grinding and apply light and steady pressure against the abrasive belt.
36. **Do Not Force Tool.** It will do the job better and safer at the rate for which it was designed.
37. **Do Not Use Damaged Belts.** Belts that show signs of wear or are torn should be replaced before continuing use.
38. **Install Belts in Correct Direction.** Install belts with the arrows on the back of the belt facing the correct direction. Belts with a lap joint must be mounted facing the correct direction.
39. **Never Use The Back Of The Large Drive Wheel.** Using the back of the large drive wheel will cause debris to travel upwards and contact operator or bystanders.
40. **Keep BG-248-3 Properly Maintained.** Ensure contact wheels and drive wheels are in good condition and are free from cuts or splits that can be a danger in operation. Replace all damaged contact wheels before operating machine.





## TECHNICAL SPECIFICATIONS

Belt Size	48" x 2" (1220 x 50.8mm)
Belt Speed	3,600 fpm (1097mpm)
Power	110V, 60hz
Motor	1.5hp (1.1kw)
Shipping Weight	175 lbs. (79.5kgs)
Shipping Dimensions	48" x 31" x 43" (1220 x 788 x 1092mm)

## TECHNICAL SUPPORT

Our technical support department can be reached at 920.684.4990, and asking for the support desk for purchased machines. Tech Support handles questions on machine setup, schematics, warranty issues, and individual parts needs: (other than die sets and blades).

For specific application needs or future machine purchases contact the Sales Department at: [sales@baileigh.com](mailto:sales@baileigh.com), Phone: 920.684.4990, or Fax: 920.684.3944.



**Note:** *The photos and illustrations used in this manual are representative only and may not depict the actual color, labeling or accessories and may be intended to illustrate technique only.*



**Note:** *The specifications and dimensions presented here are subject to change without prior notice due to improvements of our products.*



## UNPACKING AND CHECKING CONTENTS

Your Baileigh machine is shipped complete. Separate all parts from the packing material and check each item carefully. Make certain all items are accounted for before discarding any packing material.

**⚠ WARNING: SUFFOCATION HAZARD!** Immediately discard any plastic bags and packing materials to eliminate choking and suffocation hazards to children and animals.  
If any parts are missing, **DO NOT** place the machine into service until the missing parts are obtained and installed correctly.

### Cleaning

**⚠ WARNING: DO NOT USE** gasoline or other petroleum products to clean the machine. They have low flash points and can explode or cause fire.

**⚠ CAUTION:** When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.

Your machine may be shipped with a rustproof waxy coating and/or grease on the exposed unpainted metal surfaces. Fully and completely remove this protective coating using a degreaser or solvent cleaner. Moving items will need to be moved along their travel path to allow for cleaning the entire surface. For a more thorough cleaning, some parts will occasionally have to be removed. **DO NOT USE** acetone or brake cleaner as they may damage painted surfaces.

Follow manufacturer's label instructions when using any type of cleaning product. After cleaning, wipe unpainted metal surfaces with a light coating of quality oil or grease for protection.



**Important:** This waxy coating is **NOT** a lubricant and will cause the machine to stick and lose performance as the coating continues to dry.





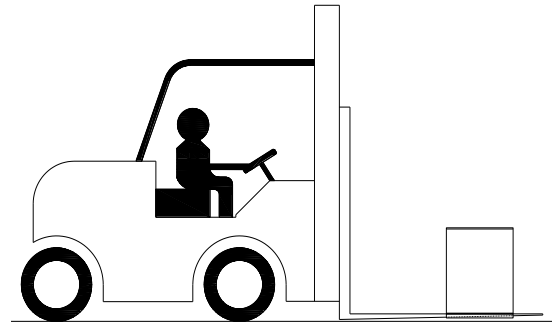
## TRANSPORTING AND LIFTING



**IMPORTANT:** *Lifting and carrying operations should be carried out by skilled workers, such as a truck operator, crane operator, etc. If a crane is used to lift the machine, attach the lifting chain carefully, making sure the machine is well balanced.*

### **Follow these guidelines when lifting with truck or trolley:**

- The lift truck must be able to lift at least 1.5 – 2 times the machines gross weight.
- Make sure the machine is balanced. While transporting, avoid rough or jerky motion, and maintain a safe clearance zone around the transport area.
- Use a fork lift with sufficient lifting capacity and forks that are long enough to reach the complete width of the machine.
- Remove the securing bolts that attach the machine to the pallet.
- Approaching the machine from the side, lift the machine on the frame taking care that there are no cables or pipes in the area of the forks.
- Move the machine to the required position and lower gently to the floor.
- Level the machine so that all the supporting feet are taking the weight of the machine and no rocking is taking place.



### **Follow these guidelines when lifting crane or hoist:**

- Always lift and carry the machine with the lifting holes provided at the top of the machine.
- Use lift equipment such as straps, chains, capable of lifting 1.5 to 2 times the weight of the machine.
- Take proper precautions for handling and lifting.
- Check if the load is properly balanced by lifting it an inch or two.
- Lift the machine, avoiding sudden accelerations or quick changes of direction.
- Locate the machine where it is to be installed, and lower slowly until it touches the floor.



## INSTALLATION

### **IMPORTANT:**

Consider the following when looking for a suitable location to place the machine:

- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.
- **LEVELING:** The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.
- **FLOOR:** This tool distributes a large amount of weight over a small area. Make certain that the floor is capable of supporting the weight of the machine, work stock, and the operator. The floor should also be a level surface. If the unit wobbles or rocks once in place, be sure to eliminate by using shims.
- **WORKING CLEARANCES:** Take into consideration the size of the material to be processed. Make sure that you allow enough space for you to operate the machine freely.
- **POWER SUPPLY PLACEMENT:** The power supply should be located close enough to the machine so that the power cord is not in an area where it would cause a tripping hazard. Be sure to observe all electrical codes if installing new circuits and/or outlets.



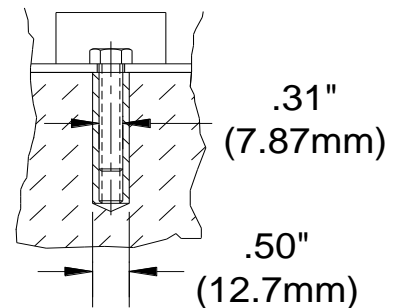
## Securing the Base

**⚠ WARNING:** Before operating; make sure it is firmly bolted to a table, bench, or the floor. If it tips over on you, it could cause severe injury or death.

The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.

## Anchoring the Machine

- Once positioned, anchor the machine to the floor, as shown in the diagram. Use bolts and expansion plugs or sunken tie rods that connect through and are sized for the holes in the base of the stand.
- This machine requires a solid floor such as concrete at a minimum of 4" (102mm) thick. 6" (153mm) minimum is preferred.



## ASSEMBLY AND SET UP

**⚠ WARNING:** For your own safety, DO NOT connect the machine to the power source until the machine is completely assembled and you read and understand the entire instruction manual.

## Mounting the Head

1. Secure the stand to the floor.
2. Mount the head assembly onto the stand with the motor placed over the hinge side of the mounting plate.
3. Secure the motor to the plate with four cap screws, eight flat washers and four Nylock nuts.







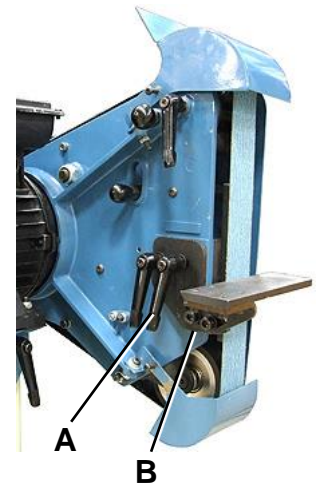
### Mounting the Tool Rest

1. Verify that the grinder is turned off and unplugged.



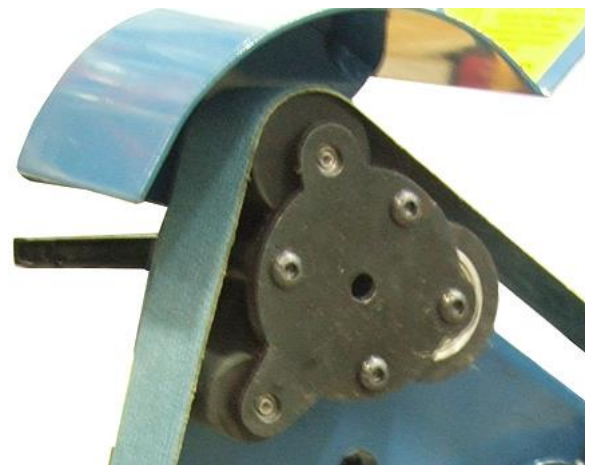
**IMPORTANT:** *The tool rest should never exceed the 1/16" (.0625") [1.58mm] MAXIMUM gap between the edge of the tool rest and the belt or 1/16 inch. The tool rest should not touch the belt.*

2. To attach the tool rest loosen the two clamp handles (A).
3. Slide the tool rest into position.
  - a. If the tool rest table is at the desired angle, position the tool rest up to the belt at the desired gap. Do not exceed 1/16" (.0625") [1.58mm]. Fully tighten the clamp handles.
  - b. If the angle of the tool rest table will be changed, position the tool rest to the belt with a gap of approximately 1/8" (.125") [3.1mm] between the tool rest and the belt. Lightly tighten the two clamp handle.
4. Change the tool rest table angle by loosening the two screws under the table.
5. Tilt the table to the desired angle and tighten the two screws (B) to secure the table at the desired angle.
6. Recheck and if needed, reset the tool rest to belt gap. Do not exceed 1/16" (.0625") [1.58mm]. Fully tighten the clamp handles.



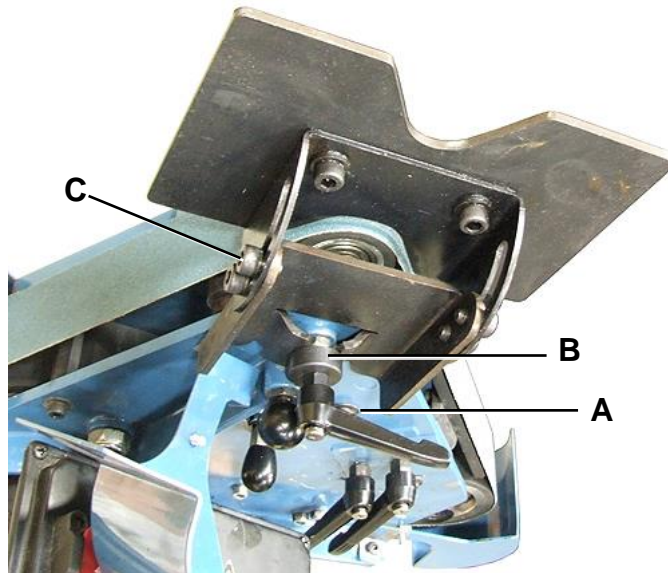
### Mounting the Work Table

1. Verify that the grinder is turned off and unplugged.
2. Select the desired wheel size to be used as described earlier in this document.
3. Tilt the BG-248-3 to the inclined position as described earlier in this document.
4. Rotate the head assembly into the horizontal position and secure in place.
5. Swing the wheel guard open and away from the radius wheels.





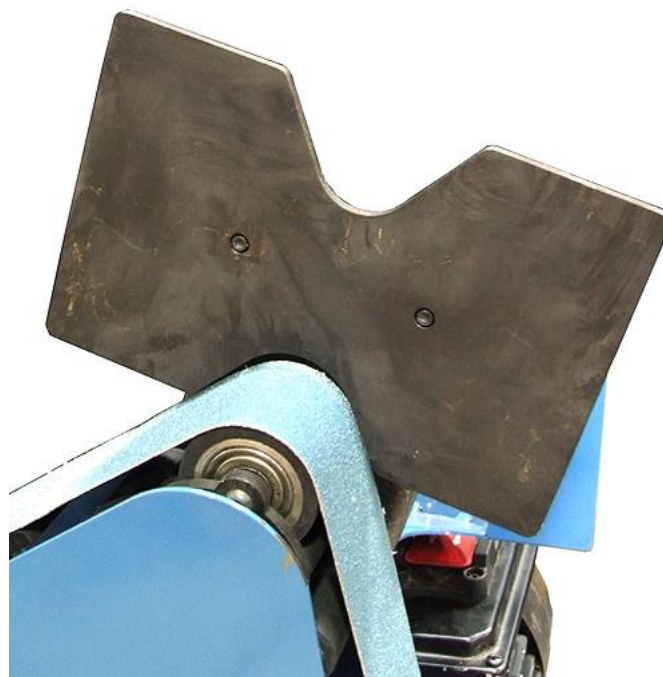
6. Loosen the table clamp (A).
7. Slide the work table into position ensuring the spacer washer (B) is underneath the work table mounting bracket.
8. Loosen the lock bolts (C) and tilt the work table to the desired angle.
9. When in position tighten the tilt lock bolts.



10. Check the clearance of the belt and the work table before tightening the locking clamp. Do not exceed 1/16" (.0625") [1.58mm]. Once satisfied the work table will not contact the moving belt, tighten the locking clamp (A) and ensure a firm fitting.





**Note:** With three sized contact wheel available in this position, you will need to adjust the work table to fit each size contact wheel.





## ELECTRICAL

 **CAUTION:** HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!  
Check if the available power supply is the same as listed on the machine nameplate.


 **WARNING:** Make sure the grounding wire (green) is properly connected to avoid electric shock. DO NOT switch the position of the green grounding wire if any electrical plug wires are switched during hookup.

### Motor Specifications

Your tool is wired for 110 volt, 60Hz alternating current. Before connecting the tool to the power source, make sure the machine is cut off from power source.

### Considerations

- Observe local electrical codes when connecting the machine.
- The circuit should be protected with a time delay fuse or circuit breaker with a amperage rating slightly higher than the full load current of machine.
- A separate electrical circuit should be used for your tools. Before connecting the motor to the power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as indicated on the tool.
- All line connections should make good contact. Running on low voltage will damage the motor.
- 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 tool 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.

 **WARNING:** In all cases, make certain the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.



- Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- Repair or replace damaged or worn cord immediately.

### **Extension Cord Safety**

Extension cord should be in good condition and meet the minimum wire gauge requirements listed below:

AMP RATING	LENGTH		
	25ft	50ft	100ft
1-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No
WIRE GAUGE			

An undersized cord decreases line voltage, causing loss of power and overheating. All cords should use a ground wire and plug pin. Replace any damaged cords immediately.

### **Power cord connection:**

1. Verify that ON/OFF switch on the motor is in the OFF position with the safety key removed.
2. Unwrap the power cord and route the cord away from the machine toward the power supply.
  - a. Route the power cord so that it will NOT become entangled in the machine in any way.
  - b. Route the cord to the power supply in a way that does NOT create a trip hazard.
3. Connect the power cord to the power supply and check that the power cord has not been damaged during installation.
4. When the machine is clear of any obstruction. The main power switch may be turn ON to test the operation. Turn the switch OFF when the machine is not in operation.



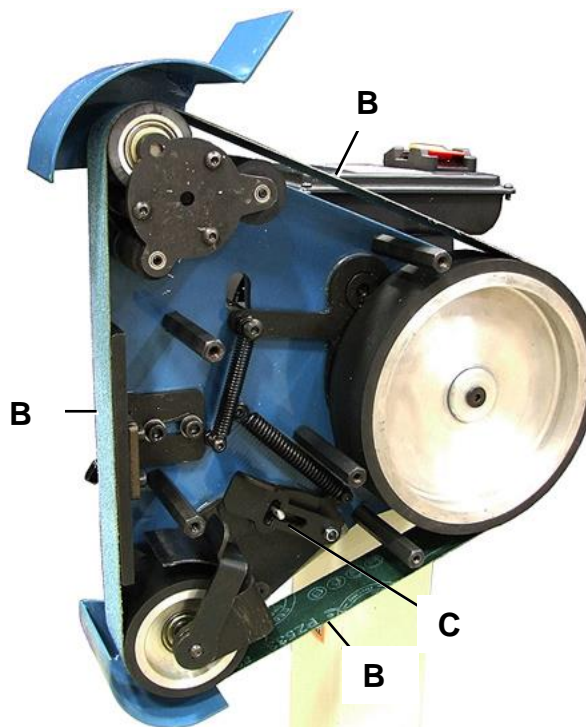
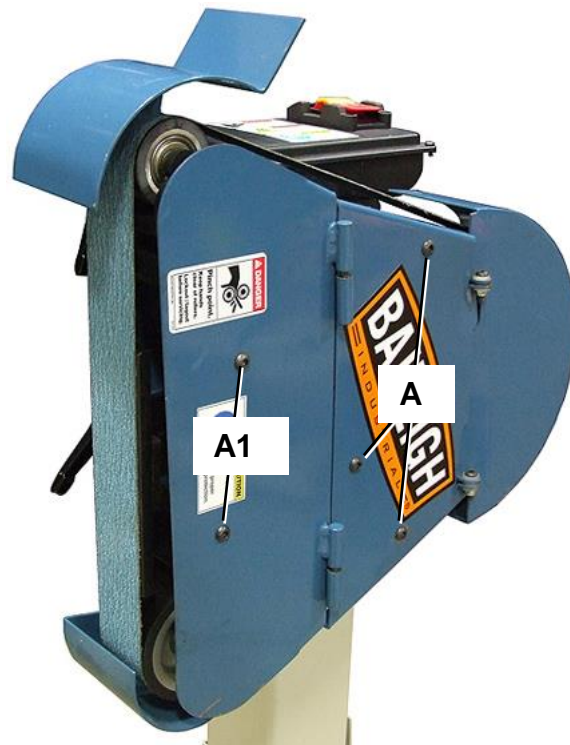
## MACHINE ADJUSTMENTS

### Belt Installation and Removal

1. Turn machine OFF, unplug machine and remove lock out key to avoid accidental starting of the machine.
2. Verify that the belt has completely stopped before attempting to change the belt.
3. Remove the five guard retaining screws (A, A1) and remove the full belt guard.
4. Push or pull the belt at any one of the three linear belt surfaces (B) to apply enough force to engage the tension lock (C). Ensure the catch is engaged before removing the belt.
5. Remove the belt and replace with the desired belt.
6. Verify the belt and machine direction of match and install the belt onto the rolls. Rotate the main drive wheel by hand to aid in getting the belt fully over the three contact wheels before proceeding.
7. When the belt is fully over the rollers, verify that hands and fingers are clear of the belt and any pinch points, and release the tension lock (C) to apply tension onto the belt.
8. Install the belt cover using the three screws (A) to secure the center and drive wheel guard. Leave the upper cover open to set belt tracking.



**Note:** Locking catch will operate in any position the machine is inclined. You may need to lift or push the lever to unlock.





## Belt Tracking

**⚠ WARNING:** Belt tracking is completed with the motor running and the upper belt guard open. The operator **MUST** focus on the adjustment process to prevent entanglement injury with the belt and rollers.

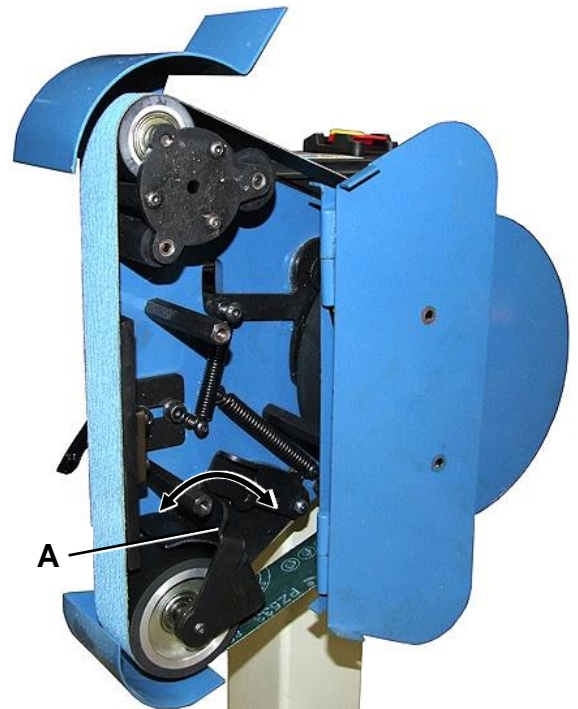
**⚠ CAUTION:** Always ensure that the belt completely covers the contact wheels. Failure to do this can result in damage to the contact wheel and possible serious injury to operator and or by standers.

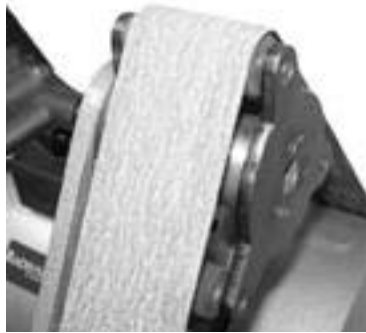


**Note:** As the construction of each abrasive belt varies you may need to adjust the Belt Tracking for each belt used on the BG-248-3. Also as belts wear Belt Tracking may be required.

Grinding sharp internal square corners can be done on the Tool Rest by tracking the belt over the edge of the contact wheel by  $1/32''$  (0.031") [0.8mm] to  $1/16''$  (0.0625") [1.6mm]. Be sure to re track the belt when this operation finished avoiding damage to contact wheels as detailed earlier in this document.

1. Belt tracking is the side to side adjustment of the belt over the contact wheels. This can be achieved by toggling the tracking lever (A).
2. As the tracking lever is displayed in the figure at right;
  - a. Pulling the tracking lever toward the left will cause the belt to track inward.
  - b. Pushing the tracking lever toward the right will cause the belt to track outward.
3. Plug the machine into the power supply and start the motor.
4. With the machine running, adjust the tracking by moving the tracking lever left or right (as shown in this figure) to cause the belt position to cover the contact wheels.
5. When the tracking is set, stop the motor and close and secure the upper cover.





Correct



Incorrect Inward



Incorrect Outward

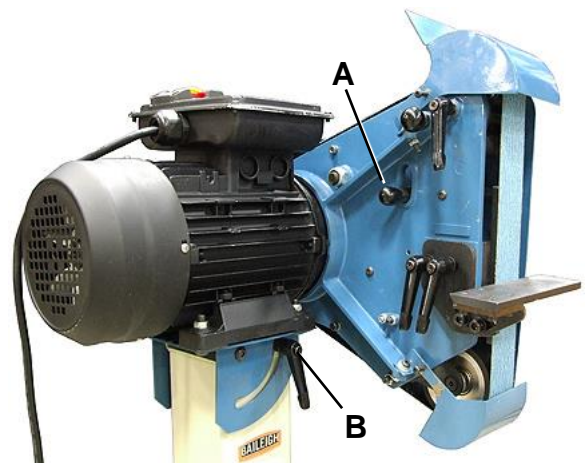
## OPERATION

**⚠ CAUTION:** Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges. When handling large heavy material make sure they are properly supported.

### Setting Head Position

The Baileigh BG-248-3 can be rotated on the motor shaft to any one of six positions to access various work areas on the belt.

1. Lift knob (A) and rotate the grinding head on the motor shaft to the desired position.
2. Release knob (A) and verify that the head is locked into one of the six positions.
3. If desired for better access to the belt for grinding, loosen the lock knob (B) and tilt the entire motor and head assembly from the vertical position to the horizontal position.
4. Tighten the lock knob (B). Failure to tighten the lock knob could result in the tool becoming unstable during operation and causing injury to the operator and others.

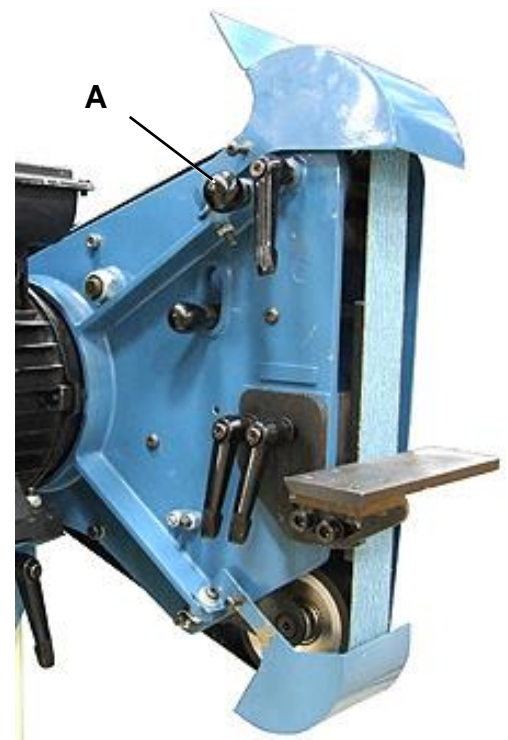




### **Selecting Wheel Size**

The Baileigh BG-248-3 has three different diameter contact wheels that can be selected without tools for a variety of work.

1. Turn machine OFF, unplug machine and remove lock out key to avoid accidental starting of the machine.
2. Verify that the belt has completely stopped before attempting to change the belt.
3. Swing the wheel guard open and away from the radius wheels.
4. Pull the lock pin (A) out to release the radius wheel carriage.
5. Rotate the carriage to set the desired radius wheel to the outside position.
6. Release the lock pin and verify that it has locked into the carriage.
7. Set the tool rest and/or work table as needed to provide the proper support and belt clearance.



### **Contact Wheel Sanding and Polishing**

- Be aware of direction the belt rotates. Always have a firm hold of the work.
- Do not contact moving belt with any part of your person, this can result in injury.
- AVOID CONTACT with the belt. The abrasive belt when running is an aggressive cutting tool.
- The rotating belt will transfer a downward force on the work piece. Keep a firm hold of the work piece.
- Extra care should be exercised when using coarse grit belts due to their rapid cutting action.
- Feed work into belt against the direction of rotation of the belt.







### Guard Operation

- All guards must cover the belt unless that work station is in use.
- Never remove the guards attached to the machine. Removing the guards can result in serious injury.
- All contact wheels can be covered by swinging guards. The operator must have all guards in place and covering the belt when the machine is in operation. The guards may be swung to the side when using that particular work station. Be sure to swing the guard back in position when finished using the particular work station.

### LUBRICATION AND MAINTENANCE



**WARNING:** Make sure the electrical disconnect is OFF before working on the machine.

Maintenance should be performed on a regular basis by qualified personnel. Always follow proper safety precautions when working on or around any machinery.

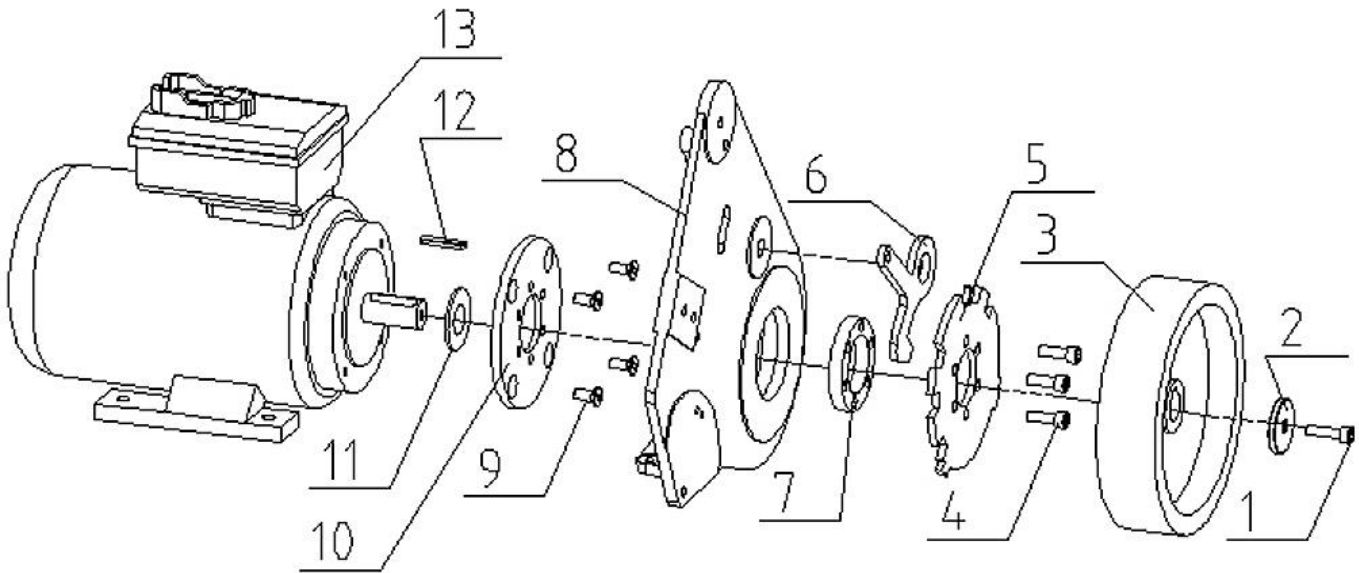
- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.



**Note:** *Proper maintenance can increase the life expectancy of your machine.*



## DRIVE ASSEMBLY PARTS DIAGRAM

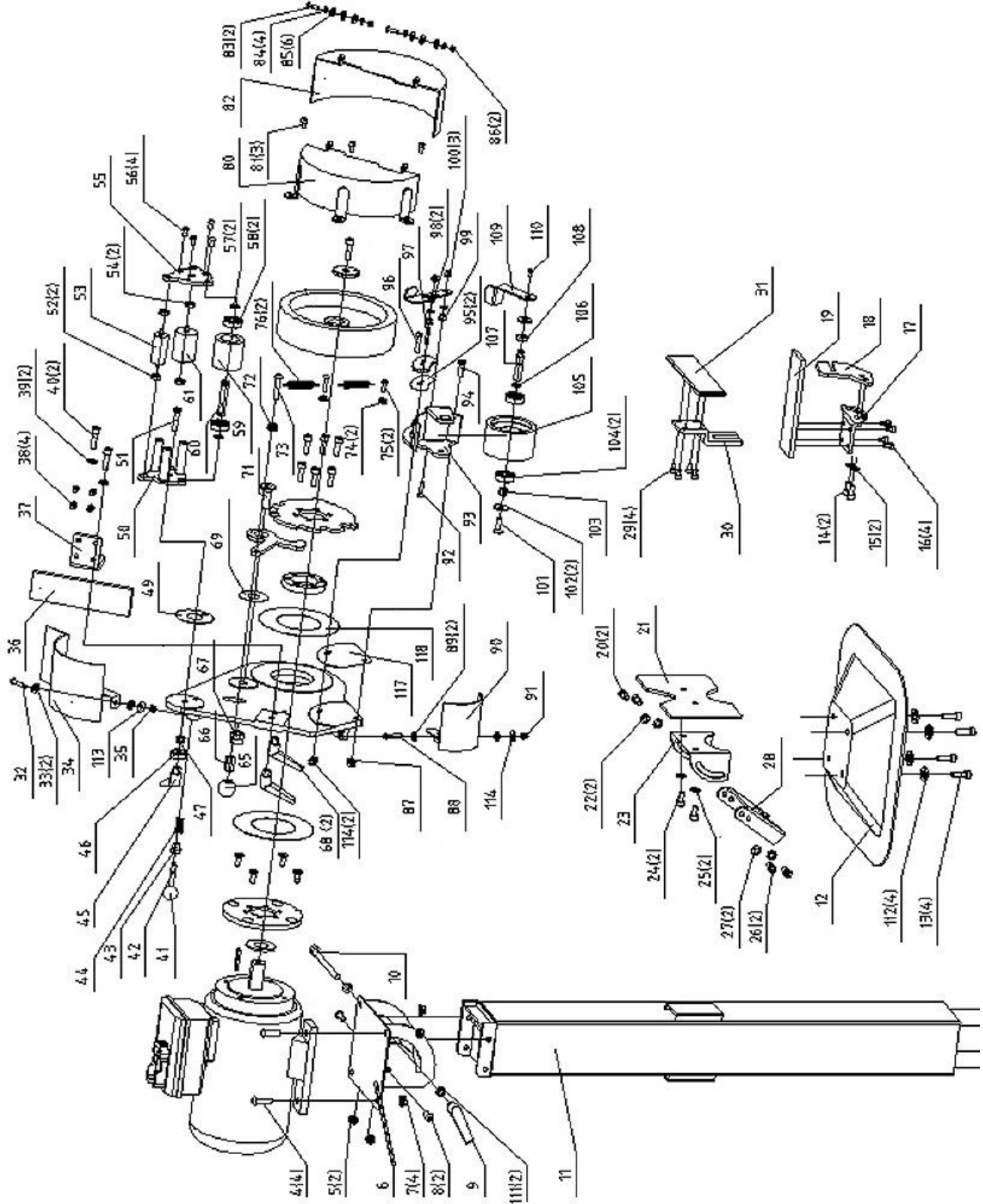


### Drive Assembly Parts List

Item	Description	Qty.
1	Socket Head Cap Screw M8-1.25x25	1
2	Retaining Washer	1
3	Drive Wheel	1
4	Socket Head Cap Screw M8-1.25x20	6
5	Index Plate	1
6	Latch Plate	1
7	Pivot Hub	1
8	Main Mounting Plate	1
9	Flared Socket Head Cap Screw M8-1.25x15	4
10	Motor Adaptor Plate	1
11	Spacer Washer	1
12	Key	1
13	Motor	1
13A	On/Off Switch	1
13B	Start Capacitor	1
13C	Run Capacitor	1



# BODY AND STAND PARTS DIAGRAM





### Body and Stand Parts List

Item	Description	Qty.
4	Socket Head Cap Screw M8-1.25x20	4
5	Nut	2
6	Mounting/Pivot Weldment	1
7	Nut	4
8	Socket Head Cap Screw	2
9	Ratcheting Lock Handle	1
10	Socket Head Cap Screw	1
11	Stand Vertical Tube	1
12	Base Plate	1
13	Socket Head Cap Screw	4
14	Socket Head Cap Screw	2
15	Flat Washer	2
16	Socket Head Cap Screw	4
17	Mounting/Pivot Plate, Tool Rest	1
18	Mounting Plate	1
19	Tool Rest Plate	1
20	Socket Head Cap Screw	2
21	Work Table Plate	1
22	Flat Washer	2
23	Mounting/Pivot Plate, Work Table	1
24	Socket Head Cap Screw	2
25	Flat Washer	2
26	Socket Head Cap Screw	2
27	Flat Washer	2
28	Mounting Plate, Work Table	1
29	Socket Head Cap Screw	4
30	Mounting Plate, Tool Stop	1
31	Tool Stop Plate	1
32	Socket Head Cap Screw	1
33	Flat Washer	2
34	Wheel Guard, 3 Wheel Corner	1
35	Nylock Nut	1
36	Belt Back Stop Plate	1



Item	Description	Qty.
37	Mounting Plate, Belt Back Stop Plate	1
38	Socket Head Cap Screw	4
39	Flat Washer	2
40	Socket Head Cap Screw	2
41	Round Lock Pin Knob	1
42	Lock Pin	1
43	Bushing	1
44	Spring	1
45	Ratcheting Lock Handle	1
46	Spacer, Counter Bored	1
47	Nylock Nut	1
49	Nylon Thrust Spacer, Wheel Carriage	1
50	Carriage Base	1
51	Flared Socket Head Cap Screw	1
52	Bearing, 625Z	2
53	1" (25.4mm) Contact/Roller Wheel	1
54	Bearing, 625Z	2
55	Carriage Cover Plate	1
56	Button Head Cap Screws	4
57	External Retaining Ring	2
58	Bearing, 6201Z	2
59	2" (50.8mm) Contact/Roller Wheel	1
60	Roller Pivot Axle	1
61	1.5" (38mm) Contact/Roller Wheel	1
65	Round Knob	1
66	Spacer	1
67	Nylock Nut	1
68	Ratcheting Lock Handle	2
69	Nylon Shim Bushing, Head Pivot Latch	1
71	Flared Socket Head Cap Screw	1
72	Nylock Nut	1
73	Button Head Cap Screw	1
74	Nylock Nut	2
75	Button Head Cap Screw	2
76	Tension Spring	2



Item	Description	Qty.
80	Shield Panel, Flat	1
81	Button Head Cap Screw	5
82	Wheel Guard, Drive Wheel	1
83	Button Head Cap Screw	2
84	Flat Washer	4
85	Nylon Flat Washer	6
86	Nylock Nut	2
87	Nylock Nut	1
88	Button Head Cap Screw	1
89	Flat Washer	2
90	Wheel Guard, Tension Wheel Corner	1
91	Nylock Nut	1
92	Socket Head Cap Screw	1
93	Tension Wheel Mounting Bracket	1
94	Flared Socket Head Cap Screw	1
95	Nylon Thrust Spacer, Tension Assembly Pivot	2
96	Button Head Cap Screw	1
97	Button Head Cap Screw	1
98	Flat Washer	2
99	Nut	1
100	Nylock Nut	3
101	Flared Socket Head Cap Screw	1
102	Nylon Washer	2
103	Nut, Long	1
104	Bearing, 6201Z	2
105	Tension Contact/Roller Wheel	1
106	External Retaining Ring	1
107	Roller Pivot Axle	1
108	Eccentric Pivot Spacer	1
109	Tracking Lever	1
110	Button Head Cap Screw	1
111	Flat Washer	2
112	Flat Washer	4
113	Flat Washer	1
114	Nylock Nut	2



Item	Description	Qty.
117	Nylon Thrust Spacer, Tension Assembly	1
118	Nylon Thrust Spacer, Grinder Head Pivot	2

**NOTES**



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