



OPERATOR'S MANUAL

Metal Working



BELT GRINDER MODEL: BG-248-2

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Rev. 01/2018

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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 convenient" 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



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 modifications.

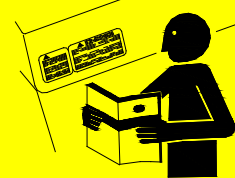


Note: This symbol refers to useful information throughout the manual.



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. **NOTICE**, which is not related to personal injury, is used without a symbol.

DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates a situation which, if not avoided, could result in property damage.

DANGER

WARNING

CAUTION

NOTICE

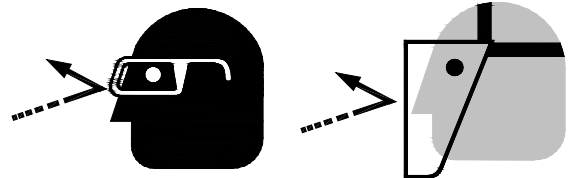


SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.



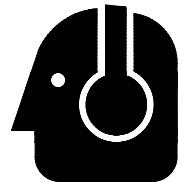
PROTECT EYES

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



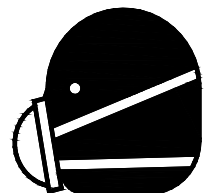
PROTECT AGAINST NOISE

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.



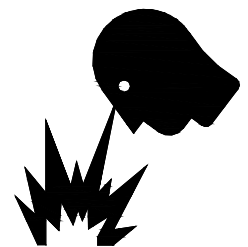
DUST HAZARD

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.



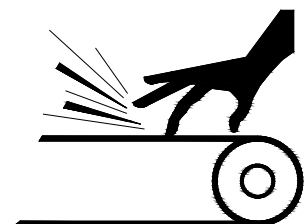
DUST PARTICLES AND IGNITION SOURCES

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



MOVING BELT ABRASIONS

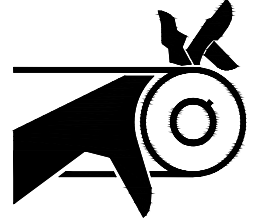
DO NOT place hands or fingers near, or in contact with sanding belt during operation.





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 button inward. 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

Dear Valued Customer:

- All Baileigh machines should be used only for their intended use.
- Baileigh does not recommend or endorse making any modifications or alterations to a Baileigh machine. Modifications or alterations to a machine may pose a substantial risk of injury to the operator or others and may do substantial damage to the machine.
- Any modifications or alterations to a Baileigh machine will invalidate the machine's warranty.

PLEASE ENJOY YOUR BAILEIGH MACHINE!PLEASE ENJOY IT SAFELY!

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. **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.



8. **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.
9. **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.
10. **Use eye and ear protection.** Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
11. **Wear a dust mask.** Some of the dust created by grinding activities may contain chemicals known to cause cancer, birth defects or other harm. Provide adequate ventilation.
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. Keep visitors a safe distance from the work area.
18. **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.
19. **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.
20. **Sparks and hot material** from grinding can easily go through small cracks and openings into adjacent areas.
21. **Do not** grind where the atmosphere might contain flammable dust, gas, or liquid vapors such as from gasoline.
22. Watch for fire and keep a fire extinguisher close by.
23. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
24. Keep **all** cords dry, free from grease and oil, and protected from sparks and hot metal.
25. 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.



26. **Never leave machine running unattended. TURN POWER OFF.** Don't leave machine until it comes to a complete stop.
27. **Do not** operate this grinder if the gap between a moving belt, wheel or disc, and the work support surface exceeds 0.118" (3mm).
28. **Minimum Stock Dimensions. DO NOT** sand material thinner than 1/16" (1.58mm), narrower than 1/8" (3.175mm), 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. **Do Not Use Damaged Belts.** Belts that show signs of wear or are torn should be replaced before continuing use.
31. **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. Use abrasive belts of proper size.
32. **AVOID USING DIRECTIONAL BELTS.** Using belts with a butt joint will outperform belts that have a lap joint and also do not require directional installation. Lap joint style belts are prone to separation.
33. **Inspect Piece Part.** Always inspect piece part for staples, nails, knots, or other imperfections that could become projectiles causing personal injury.
34. **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.
35. **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.
36. 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.
37. **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.
38. **Hold Material Tightly.** Always hold the work piece firmly when grinding and apply light and steady pressure against the abrasive belt.
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 the grinder 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.
41. **Turn off** power before checking, cleaning, or replacing any parts.



- 42. USE ABRASIVE BELTS FROM RESPECTED BELT MANUFACTURES. Not all abrasive belts are created equal. Belts that are very inexpensive are usually manufactured cheaply.
- 43. KNOW WHAT YOUR GRINDING. Avoid mixing different metals, alloys, and materials. To mix such materials might create a fire or explosion hazard. Exotic materials such as titanium, magnesium, and other chemically active materials will present fire and explosion hazards that if ignored can result in grave personal injury and/or property damage. Consult with the material supplier or other qualified expert regarding the materials on which you wish to work.

TECHNICAL SPECIFICATIONS

| | |
|---------------------|---|
| Belt Size | 48" x 2" (1220 x 50.8mm) |
| Belt Speed | 8,000sfpm (2438smpm) |
| Power | 110V, 60hz |
| Motor | 1.5hp (1.1kw), 60hz, 14A, 3450rpm |
| Shipping Weight | 113 lbs. (51kgs) |
| Shipping Dimensions | 26.8" x 24.4" x 13.2" (680 x 620 x 335mm) |

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, 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.

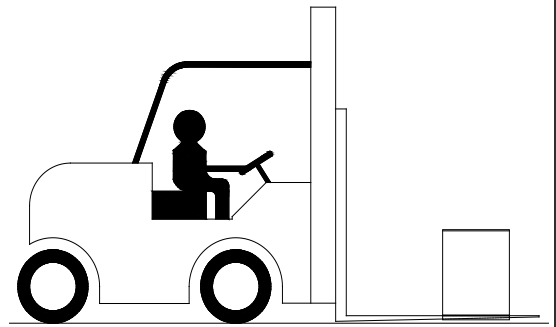




TRANSPORTING AND LIFTING

NOTICE: *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.*

- 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.



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 safety and accuracy of any machine depends on the precise placement of it to the mounting surface.

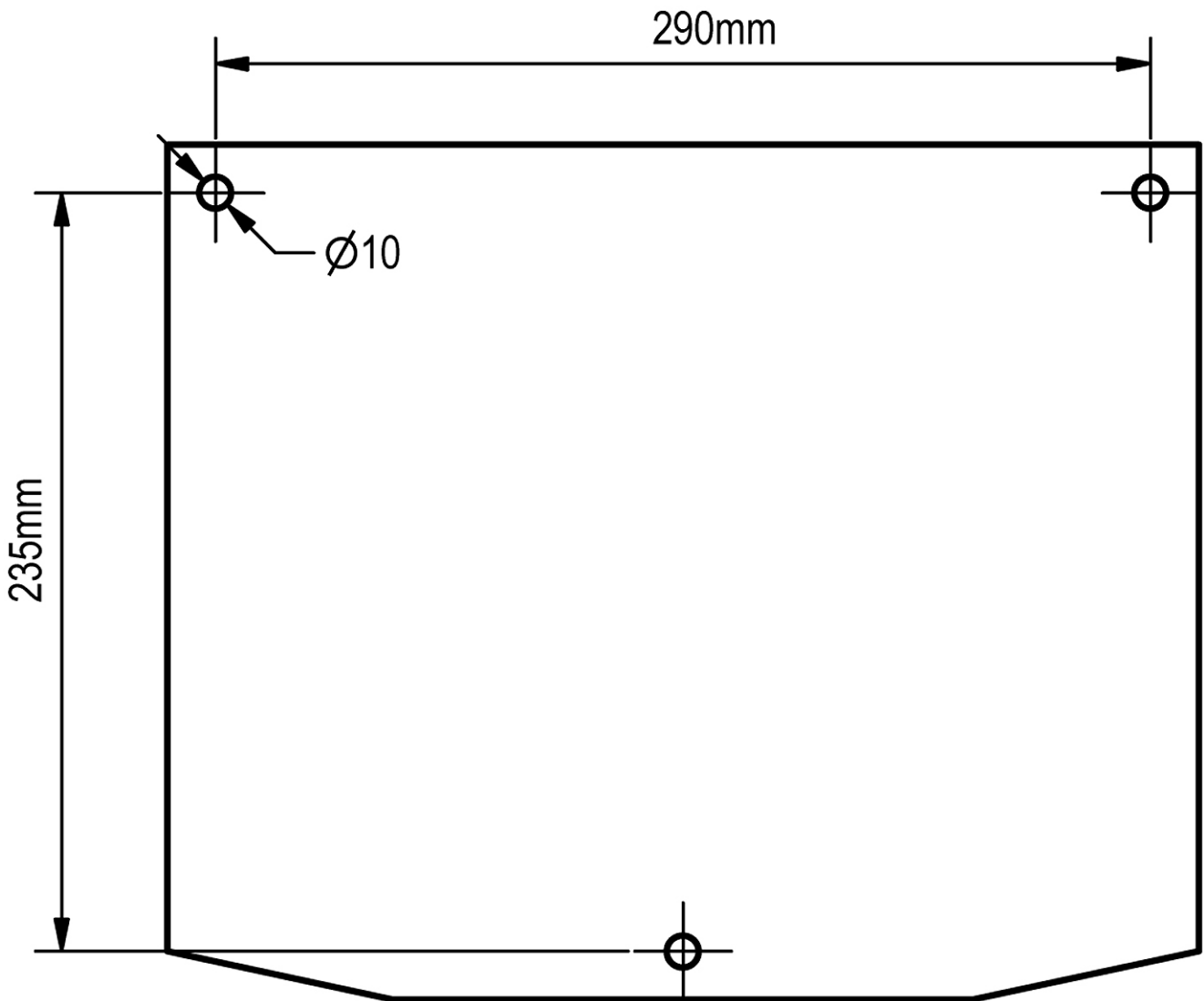
If you intend to mount the Baileigh machine on a workbench be aware of the following:

- Overall weight of the machine and the weight of material being processed.
- Make sure the workbench is properly reinforced to support the total weight.
- The strongest mounting option is where the holes are drilled all the way through the workbench and the machine is secured with bolts, washers, and nuts.



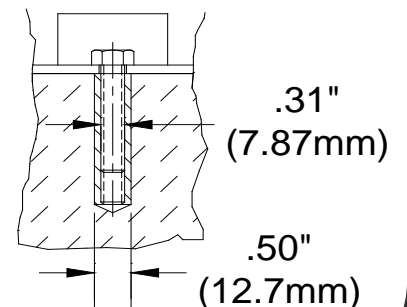
Base Mounting Dimensions

Use the dimensions and pattern below to layout and drill the mounting holes to secure the grinder to a bench or stand.




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.





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.


Power Specifications

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

Before switching on the power, you must check the voltage and frequency of the power to see if they meet with the requirement, the allowed range for the voltage is $\pm 5\%$, and for the frequency is $\pm 1\%$.

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.



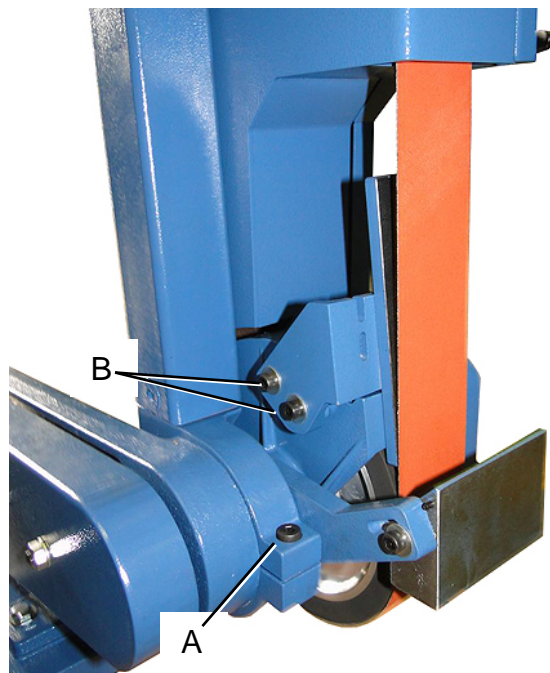
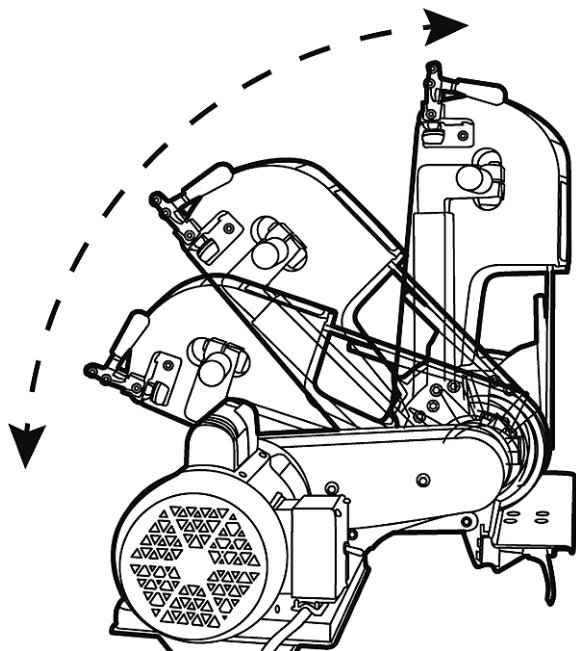
SET UP AND ADJUSTMENTS

⚠ WARNING: For your own safety, **DO NOT** connect the machine to the power source when performing set up, adjustments, and maintenance operations.

Head Pivoting

Once the grinder is securely mounted to a bench or stand, adjust the grinding head to either the horizontal or vertical position as desired for the type of grinding to be performed.

1. Loosen the pivot collar (A) and rotate the head assembly to the desired position.
2. When the head is in the desired position, tighten the pivot collar bolt to snug and then 1/4 to 3/8 of a turn tighter.



Platen Adjustment

1. Adjust the platen by loosening the socket head cap screws (B) and rotating the platen to provide a flat backing surface for the abrasive belt without actually touching the back of the belt.
2. Hold the platen in position and tighten the two socket head cap screws just enough to hold the platen in position.

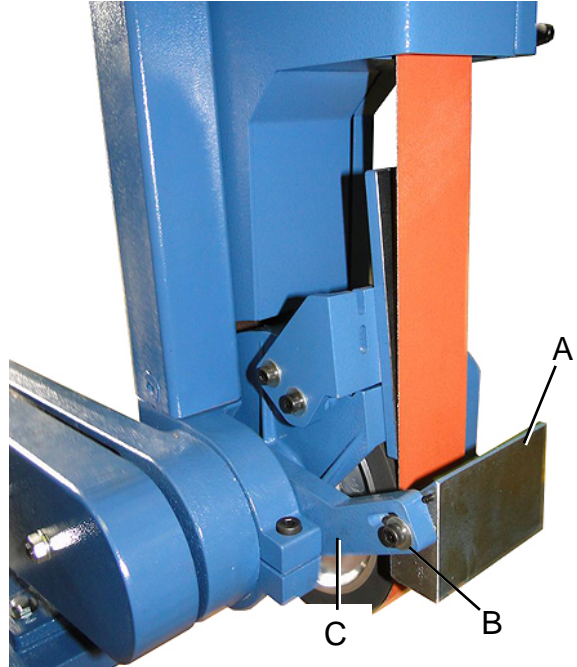


Work Rest Adjustment



Important: Adjust the work rest so that the edge of the rest (A) is not touching the abrasive belt and is no more than 0.118" (3mm) away from the abrasive belt even with any belt deflection.

1. Loosen the socket head cap screw (B) and rotate the work rest so that it is at the desired angle to the abrasive belt.
2. Tighten the socket head cap screw.
3. If needed, the work rest mounting bracket can be rotated by loosening the socket head cap screw at the bottom of the bracket and rotating as needed so that the grinding area will be directed at the contact wheel or the platen.
4. Tighten the bracket socket head cap screw when the desired position is achieved.



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 materials make sure they are properly supported.

ROTATING EQUIPMENT CAN BE DANGEROUS TO OPERATORS AND THOSE WHO MAY BE IN ITS IMMEDIATE OPERATING VICINITY. IT IS THE ABSOLUTE AND DIRECT RESPONSIBILITY OF THE OPERATOR(S) OF THIS EQUIPMENT TO UNDERSTAND AND OBEY THE OPERATING SAFETY REQUIREMENTS.

When selecting where to grind on your machine, remember that this grinder has three designated grinding areas.

- Contact wheel
- Platen area.
- Slack belt area, A larger slack belt area may be created by removing the backup platen. Remove the two Allen screws that secure the platen to the contact wheel guard. Rotate the guard forward to cover the pinch point between.



1. With the grinder disconnected from the power source, setup the grinder for the operation intended. Install the desired grinding belt, set the work rest, provide adequate work area, lighting and ventilation.
2. Set the head to the desired angel from horizontal to vertical as needed.
3. Start the grinder and allow the belt to come to full speed.
4. Verify that the belt is tracking centered on the contact wheel.
5. Grasp the material firmly and is a way that provide positive operator control and leverage and keeps hands and fingers away from the grinding belt.
6. Draw the work piece across the grinding belt in a smooth even manner using only enough pressure into the grinding belt to allow the belt to remove material.

SHARPENING

Sharpening may to completed by use of optional work rest attachments or by careful an well practiced freehand operation.

Mower Blades

1. Free the blade of any grease, dirt, or clippings prior to sharpening.
2. Check the blades to make sure they are not bent or cracked.
3. Using a blade balancer, check the blade for its balance.
4. When sharpening start by grinding the light end of the blade and then follow with the heavy end. Move the blade in one direction only. Based upon a standard mower blade, the direction will be from left to right.
5. Rest blade on table, gently move blade into rotating wheel and draw the blade to the right.
Multiple passes are required to achieve the edge desired. Minimal pressure to the contact wheel is recommended. The idea is to have the belt do the cutting, not by using force against the contact wheel.
Make rapid passes, each pass should only take seconds in total time. If you are not moving the blade across the wheel in a rapid fashion, you will create hot spots in the blade, and the blade will not move easily across the wheel.
6. After sharpening the first edge, use the slack area of the belt to remove any burrs that may have been created in the sharpening procedure.
7. Move to the second edge and repeat the procedure.
8. Check the balance of the blade to ensure proper stock removal.





Mulching Blade Sharpening

1. Free the blade of any grease, dirt, or clippings prior to sharpening.
2. Check the blades to make sure they are not bent or cracked.
3. Remove the vertical platen by removing the two Allen bolts that attach it to the contact wheel guard. By removing the platen, a large “slack” free belt area is created. Using a flexible back belt or a narrow stiff back belt you will be able to use the slack area to sharpen the blade.
4. It is important to readjust the contact wheel guard to remove the pinch point created by removing the platen.
5. The operator will freehand the desired angle.
6. After sharpening the first edge, use the slack area of the belt to remove any burrs that may have been created in the sharpening procedure.
7. Move to the second edge and repeat the procedure.
8. Check the balance of the blade to ensure proper stock removal.



Rotary-Style Offset Flail Blade Sharpening

Depending on style of the blade, balancing the blade maybe different than described in this manual. Most rotary blades can be balanced using a simple balance-style scale. Since there is no other way to check for balance due to the offset hole style of the blades, use of a scale is to make sure that the blades are all equal in mass. Using a scale allows you to make sure each blade weighs the same amount, keeping the blades in balance. Start with the lightest blade and then sharpen the heavier blade, checking the blades for balance.

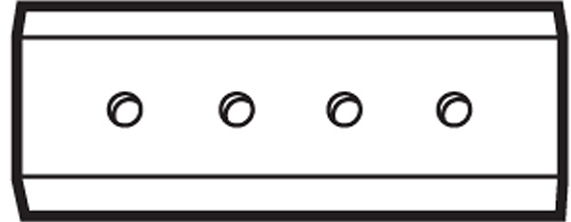


- Free the blade of any grease, dirt, or clippings prior to sharpening.
- Check the blades to make sure they are not bent or cracked.
- Attach the galvanized tubing to the worktable, using two button head screws and two keps nuts. This changes the angle for the rotary-style blade to a factory recommended angle. As with mower blades, it is recommended to move the blade in one direction only.
- If the blade has deep chips, use the contact wheel to “face the blade”.
- Move up on the contact wheel a couple of inches to the centerline and run the blade back and forth several times to even the edge of the blade.
- Rest the blade against the tubing and start the sharpening process.
- Use only light inward pressure. The belt and speed of the belt will do all the work.



Chipper Blade Sharpening

- Free the blade of any grease, dirt, or clippings prior to sharpening.
- Check the blades to make sure they are not bent or cracked.
- Depending on style of the blade, balancing the blade maybe different than described in this manual. Most chippers require all blades to be the same height. Start with the shortest blade and use it for a reference, then move on to the others in the set.
- Only sharpen blades that are long and wide enough to safely hold on to.
- As with any sharpening process on the grinder move only in one direction and apply minimal inward force.



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.
- Vacuum and remove dust and debris build-up from the machine and the machine belt track.
- Verify proper belt tracking.



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



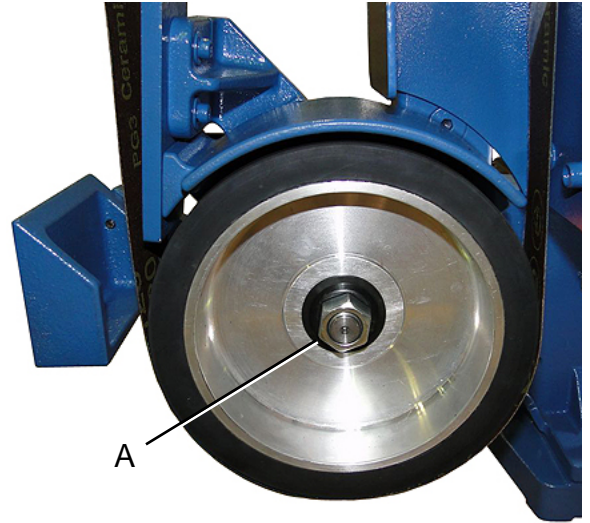
Weekly

- Check the nut (A) that secures the contact wheel to its mount.

Ensure it is tightened to 10–15lbs. ft. (1.4–2 kg m) of torque.

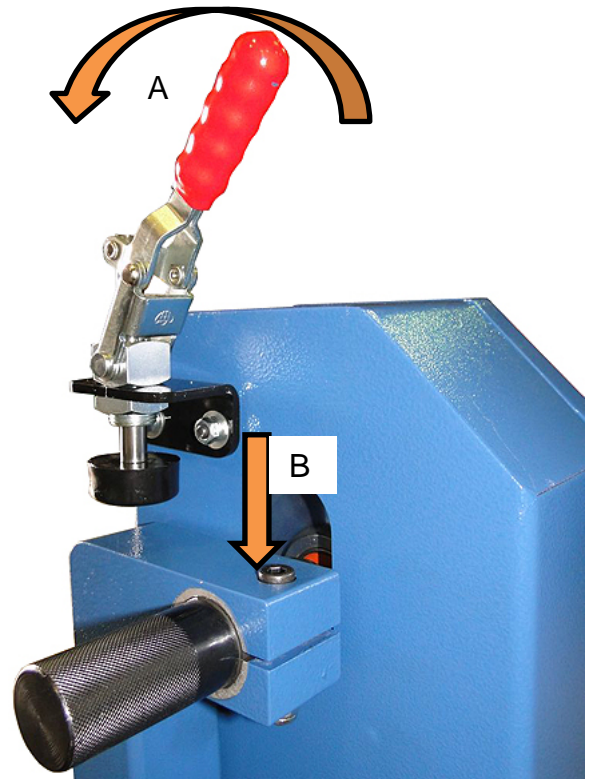
Monthly

- Apply light machine oil to tracking assembly. Two drops of oil will be sufficient.
- Check the drive belt tension. If you can hear the belt "slap" the frame when the drive motor starts, the belt may require re-tensioning. Do this by loosening the two nuts that secure the motor to the belt guard and slide the guard forward. Do not over tighten the belt. Doing so will shorten the life of the machine bearings. Tighten the two nuts.



Abrasive Belt Changing

1. Disconnect the grinder from the power source.
2. Rotate the cam handle (A) from front to back to cause the plunger to push down on the belt tension assembly (B). This relieves the belt tension so that the belt can be removed.
3. Open the cover to the belt and drive wheel and slide the belt outward off of the wheel and out of the belt housing.
4. Install the new belt onto the drive wheel and center the belt side to side on the wheels. This is the initial belt tracking.
5. Release the cam handle (A) to allow the tension assembly to raise and apply tension to the belt.
6. Turn the contact wheel by hand for one or two revolutions of the belt to check the install and the tracking.
7. Close and latch the cover.
8. Connect the grinder to the power supply and test the operation and verify that the belt is tracking correctly.
9. Adjust tracking if needed.





Attachment Adjusting

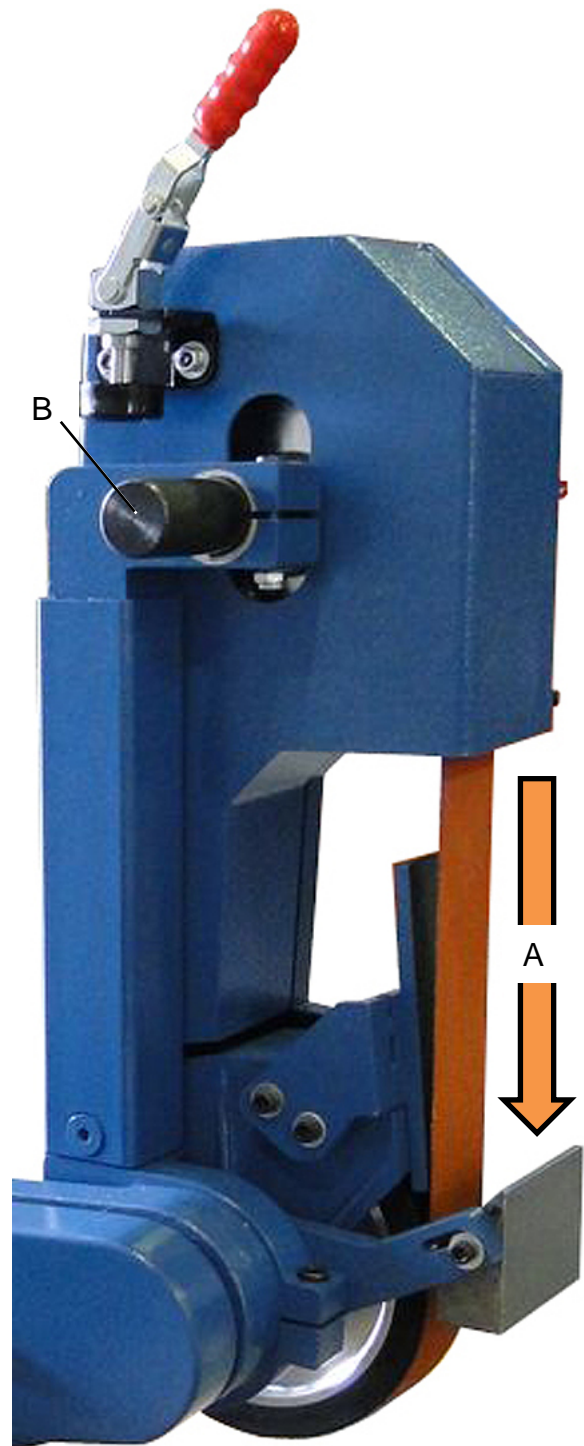
Unlike a stone grinder, the diameter of the contact wheel will remain nearly the same the entire life of the wheel. Also, since the diameter of the wheel will remain constant you will rarely need to adjust the table height. Another advantage of using a belt to grind metal versus a stone is when a stone reduces in diameter, you lose surface speed, making grinding times increase. A stone wheel may turn at 6,000 surface feet per minute when it's brand new, but after limited use the diameter of the stone will decrease and the result will be increased sharpening times and the stone will retain more heat.

Belt Tracking

1. Engage the motor by pulling the Start/Stop switch out to the Run position.

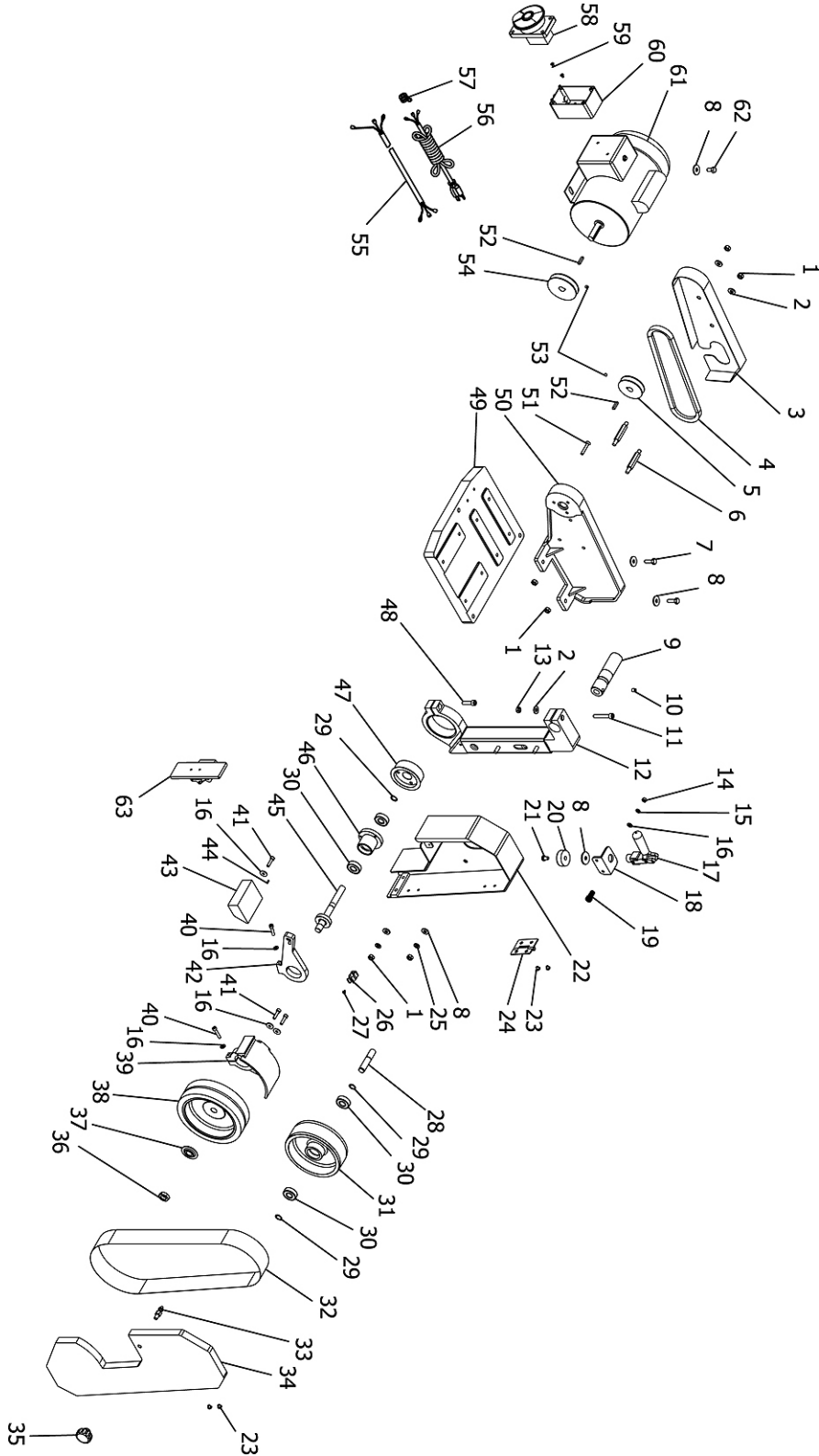
The belt must rotate smoothly in a downward direction (A, toward the work rest) staying centered on the contact wheels. If tracking is not correct, immediately turn the machine OFF.

2. Use the tracking adjustment knob (B) on the upper left side of the machine to track the belt to the center of the contact wheel.
 - a. Turning the knob will cause the belt to track to the right or to the left.





PARTS DIAGRAM





Parts List

| Item | Description |
|------|---------------------------------------|
| 1 | Hex Nut 8mm-1.25p |
| 2 | Flat Washer 5/16" |
| 3 | Belt Cover |
| 4 | Belt |
| 5 | Pulley |
| 6 | Guard Sleeve |
| 7 | Hex Bolt-M8*25mm |
| 8 | Flat Washer 5/16" |
| 9 | Tracking Knob |
| 10 | Set Screw M8*8mm |
| 11 | Socket Head Cap Screw M8*50mm |
| 12 | C-Frame Tracking Shaft Mount Assembly |
| 13 | Nylon Nut M8-P1.25 |
| 14 | Hex Nut M6 |
| 15 | Lock Washer 1/4" |
| 16 | Flat Washer 1/4-16*1.2mm |
| 17 | Clamp |
| 18 | Support Platen |
| 19 | Flat Head Cap Screw M6*16mm |
| 20 | Rubber Feet |
| 21 | Flat Head Cap Screw M8*12mm |
| 22 | Body |
| 23 | FLAT HEAD CAP SCREW M6*8mm |
| 24 | Hinge |
| 25 | Lock Washer 5/16" |
| 26 | Latch Seat |
| 27 | Flat Head Cap Screw M4*6mm |
| 28 | Wheel Shaft |
| 29 | External Retaining Ring S15 |
| 30 | Bearing 6202LLU |
| 31 | Idler Wheel |
| 32 | Sanding Paper 2"*48"-#120 |
| 33 | Guard Sleeve [S] |

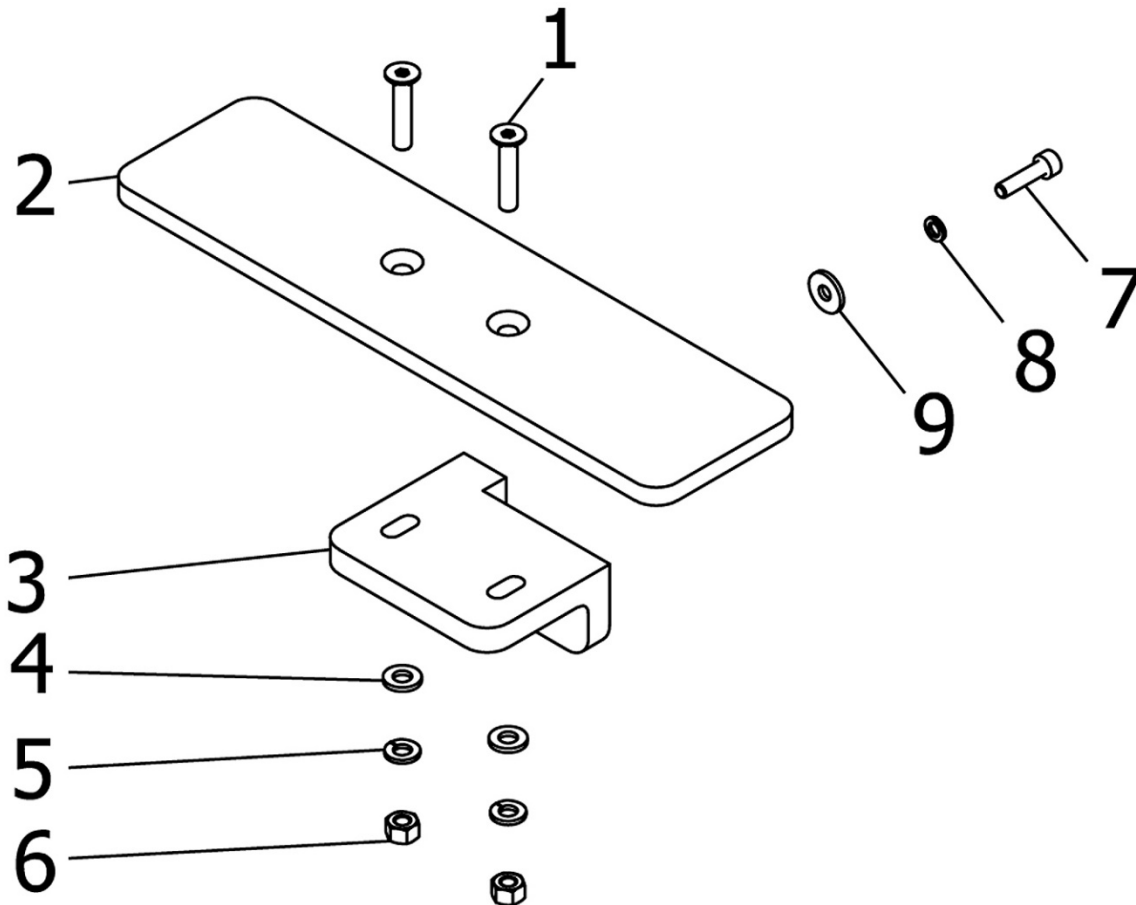


| Item | Description |
|------|-------------------------------|
| 34 | Door |
| 35 | Catch Knob |
| 36 | Hex Nut M16 |
| 37 | Cup Washer |
| 38 | Contact Wheel |
| 39 | Guard, Contact Wheel |
| 40 | Socket Head Cap Screw M6*30mm |
| 41 | Socket Head Cap Screw M6*25mm |
| 42 | Arm, Workrest Support |
| 43 | Workrest |
| 44 | Pin |
| 45 | Drive Wheel Axle |
| 46 | Axle Seat |
| 47 | Cup |
| 48 | Socket Head Cap Screw M8*30mm |
| 49 | Base |
| 50 | Frame |
| 51 | Flat Head Screw M6*40mm |
| 52 | Key 5*5*15mm |
| 53 | Set Screw M6*6mm |
| 54 | Motor Pulley |
| 55 | Cord |
| 56 | Power Cord |
| 57 | Strain Relief |
| 58 | Circular Stop Plane Switch |
| 59 | Phillips Head Screw M5*8 |
| 60 | Switch Box |
| 61 | Motor |
| 62 | Hex Bolt-M8*15mm |
| 63 | Platen Bracket Assembly |



OPTIONAL ACCESSORIES

BAR DRESSER PARTS DIAGRAM

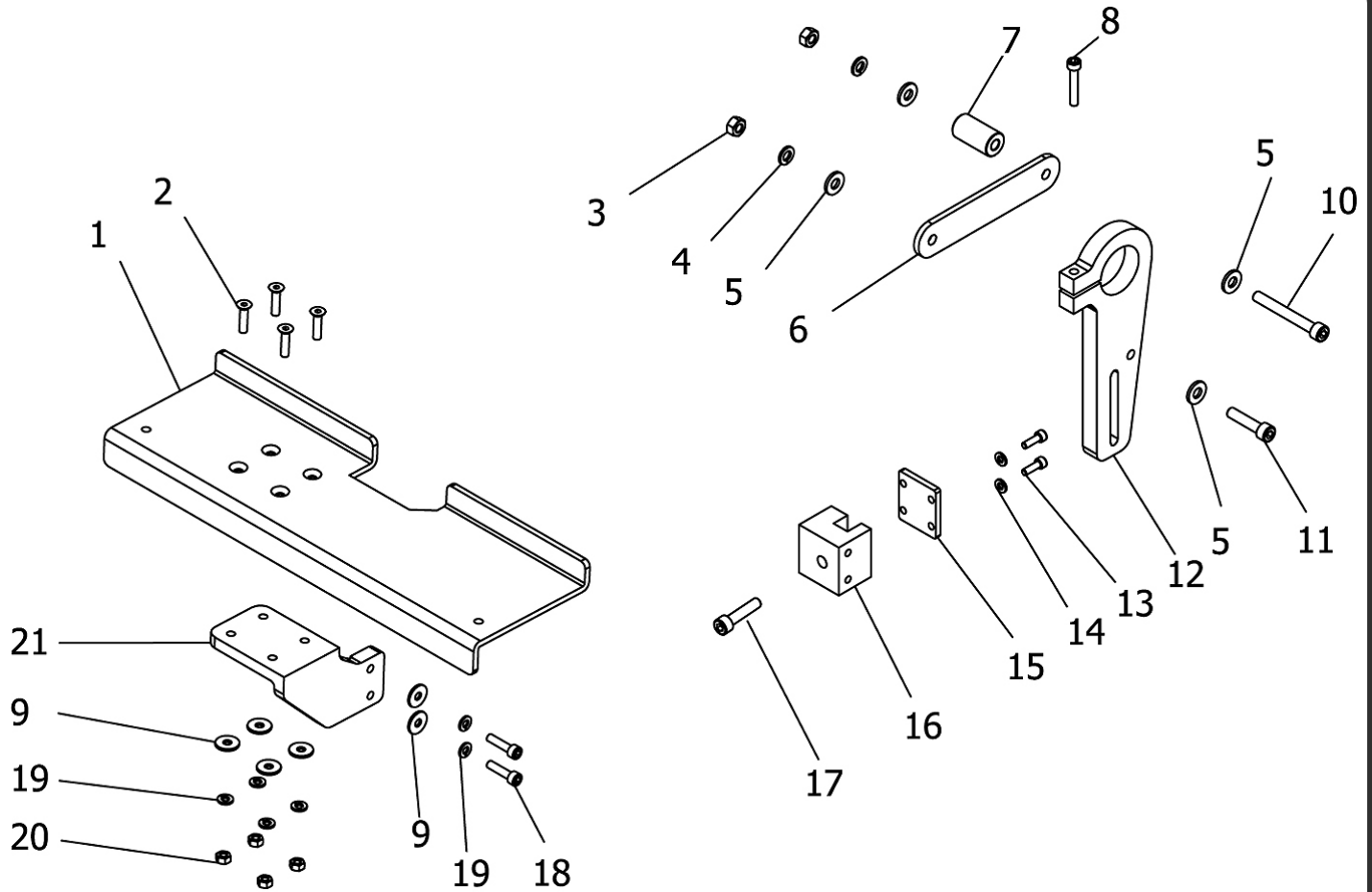


Bar Dresser Parts List

| Item | Description |
|------|-------------------------------|
| 1 | Flat Head Screw M6*30mm |
| 2 | Extension Plate |
| 3 | Bracket |
| 4 | Flat Washer 1/4-16*1.2mm |
| 5 | Lock Washer 1/4" |
| 6 | Hex Nut M6 |
| 7 | Socket Head Cap Screw M5*20mm |
| 8 | Spring Washer M5 |
| 9 | Flat Washer |



BLADE SHARPENING PARTS DIAGRAM



Blade Sharpening Parts List

| Item | Description | Item | Description |
|------|-------------------------------|------|-------------------------------|
| 1 | Table | 11 | Socket Head Cap Screw M8*35mm |
| 2 | Socket Head Cap Screw M6*25mm | 12 | Bracket |
| 3 | Hex Nut 8mm-1.25p | 13 | Socket Head Cap Screw M5*16mm |
| 4 | Lock Washer 5/16" | 14 | Flat Washer |
| 5 | Flat Washer 5/16" | 15 | Mounted Plate |
| 6 | Support Lever | 16 | Slide Block |
| 7 | Bushing | 18 | Socket Head Cap Screw M6*25mm |
| 8 | Socket Head Cap Screw M6*35mm | 19 | Lock Washer 1/4" |
| 9 | Flat Washer 1/4-16*1.2mm | 20 | Hex Nut M6 |
| 10 | Socket Head Cap Screw M8*65mm | 21 | Table Base |



NOTES



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