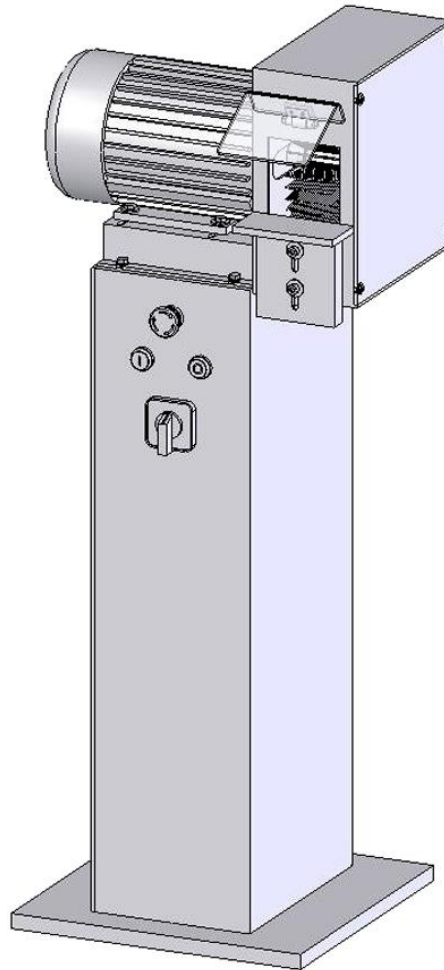




# OPERATOR'S MANUAL

Metal Working



## DEBURRING MACHINE MODEL: DM-10

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## Table of Contents

THANK YOU & WARRANTY .....	1
INTRODUCTION.....	3
GENERAL NOTES.....	3
SAFETY INSTRUCTIONS .....	4
SAFETY PRECAUTIONS .....	7
Dear Valued Customer:.....	7
TECHNICAL SPECIFICATIONS .....	9
TECHNICAL SUPPORT .....	9
UNPACKING AND CHECKING CONTENTS.....	10
Cleaning .....	10
TRANSPORTING AND LIFTING .....	11
INSTALLATION.....	11
Anchoring the Machine .....	12
GETTING TO KNOW YOUR MACHINE .....	13
ELECTRICAL .....	14
BRUSH WHEEL TIPS.....	16
Brushing Pressure and Speed.....	16
OPERATION.....	17
Operation Set Up.....	17
Dust Bag.....	18
LUBRICATION AND MAINTENANCE .....	19
Steel Brush Removal and Installation.....	20
Steel Brush Adjustment .....	21
PARTS DIAGRAM .....	22
Parts List .....	23
Electrical Components.....	24
ELECTRICAL SCHEMATIC .....	25



## 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, (f) 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 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.



**DANGER**



**WARNING**



**CAUTION**



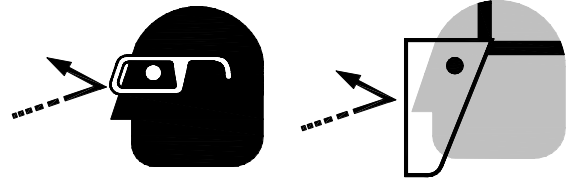


**SAVE THESE INSTRUCTIONS.**  
**Refer to them often and use them to instruct others.**



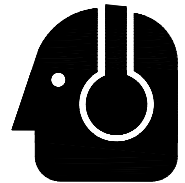
### **PROTECT EYES**

Wear safety glasses or suitable eye protection when working on or around machinery. A full-face shield is recommended.



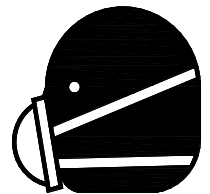
### **PROTECT AGAINST NOISE**

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.



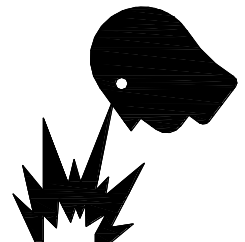
### **DUST HAZARD**

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**

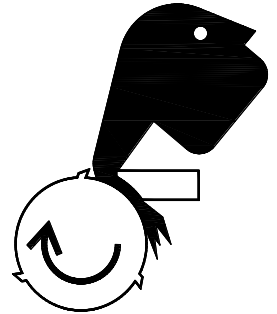
**DO NOT** operate this machine in areas where explosion risks are high. Such areas include locations near pilot lights, open flames, or other ignition sources.





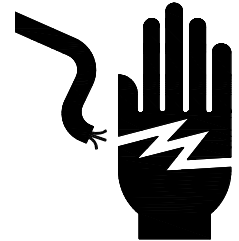
### **ENTANGLEMENT HAZARD – ROTATING BELTS**

Keep hands and fingers away from the abrasive belt when the machine is plugged in and or powered on. Keep guards in place at all times while the machine is running.  
Contain long hair, **DO NOT** wear jewelry or loose fitting clothing.



### **HIGH VOLTAGE**

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



### **EMERGENCY STOP BUTTON**

In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the **E-STOP** button. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not 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. **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. **Secure work.** Use clamps or a vise to hold work when practice.
20. **Direction of feed.** Feed work into a blade or cutter against the direction of its rotation.
21. **Never leave tool running unattended.** Turn power off. Do not leave machine until it comes to a complete stop.
22. **Sparks and hot material** from cutting can easily go through small cracks and openings into adjacent areas.
23. **Do not** cut where the atmosphere might contain flammable dust, gas, or liquid vapors such as from gasoline.
24. Wear oil-free protective garments such as leather gloves, heavy shirt, high shoes or boots, cuffless trousers, and a cap.



25. Watch for fire and keep a fire extinguisher close by.
26. **Turn off** power before checking, cleaning, or replacing any parts.
27. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
28. Keep **all** cords dry, free from grease and oil, and protected from sparks and hot metal.
29. 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.
30. **DO NOT** bypass or defeat any safety interlock systems.
31. Keep visitors a safe distance from the work area.

## **TECHNICAL SPECIFICATIONS**

Wheel Dimensions (D x W)	Ø9.8" x 2.3" (Ø250 x 60mm)
Arbor	1" (25.4mm)
Speed	2 @ 1740rpm / 3490rpm
Wheel Surface Speed Ø10" (Ø254mm)	4555 / 9130fpm (1388 / 2783m/m)
Power	220V, 3ph, 60hz
Motor	3Hp (2.23kw) 220V, 3ph, 60hz, 10A
Dust Port	1 @ 4" (101mm)
Floor Stand	Included
Dimensions (L x W x H)	21.25" x 15.75" x 48.8" (540 x 400 x 1240mm)
Weight	99lbs. (45kg)

## **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.





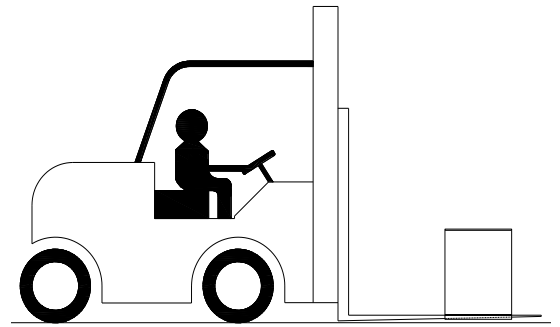
## **TRANSPORTING AND LIFTING**



**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.



## **INSTALLATION**

### **IMPORTANT:**

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

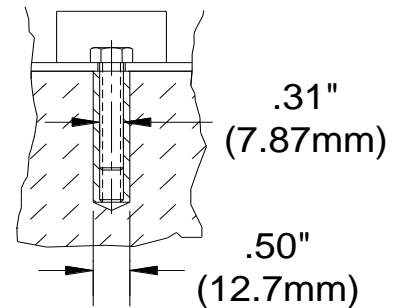
- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for 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.

### Anchoring the Machine

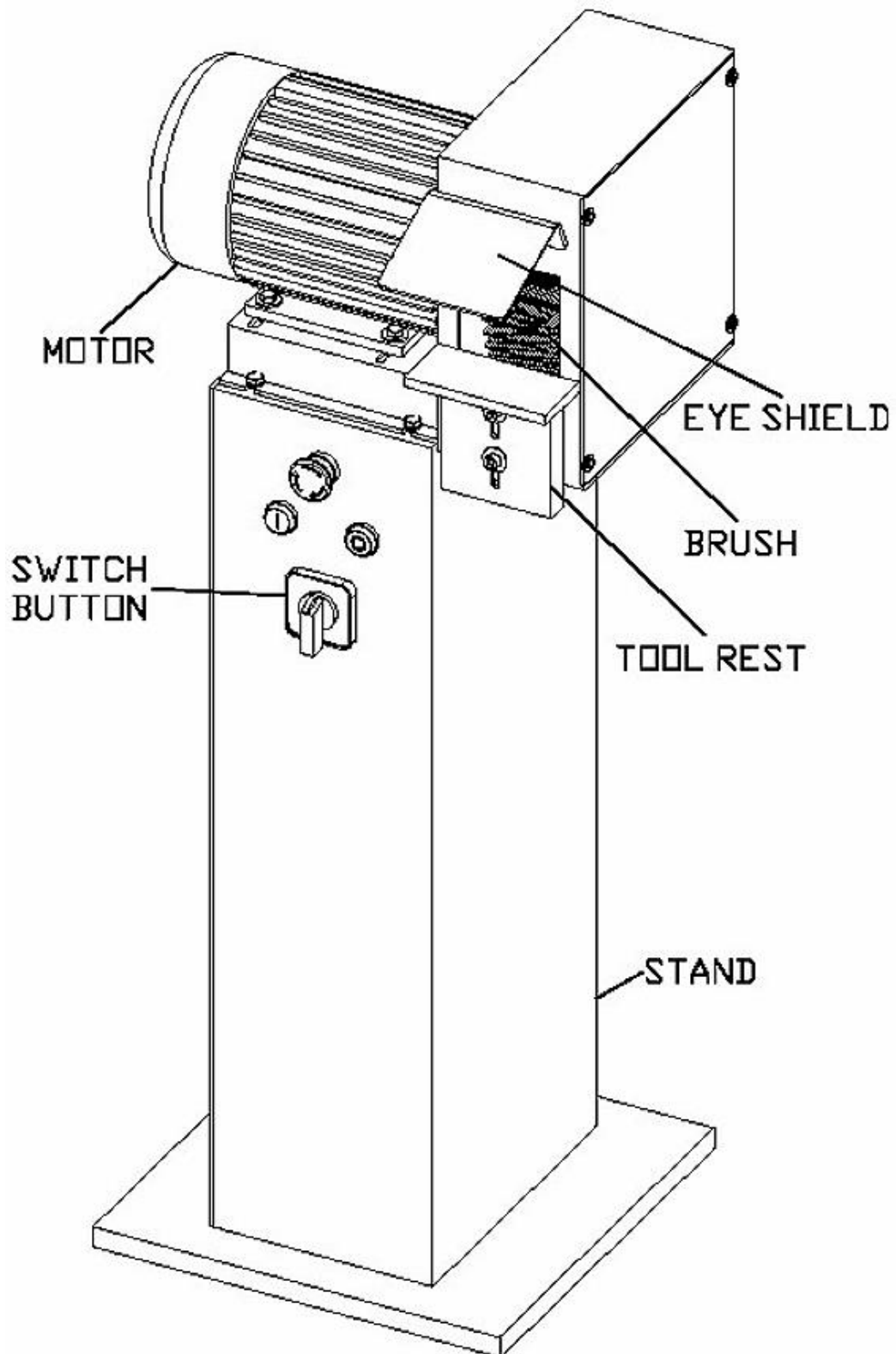
- Once positioned, anchor the machine to the floor, as shown in the diagram. Use bolts and expansion plugs or sunken tie rods that connect through and are sized for the holes in the base of the stand.
- This machine requires a solid floor such as concrete at a minimum of 4" (102mm) thick. 6" (153mm)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







## GETTING TO KNOW YOUR MACHINE







## **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 220 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. Turn the main disconnect switch on the control panel to the OFF position.
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. Have an electrician install the correct plug for the application. (customer supplied)
4. Connect the power cord to the power supply and check that the power cord has not been damaged during installation.
5. 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.



## **BRUSH WHEEL TIPS**

Brush wheels are manufactured in a wide variety of materials or a wide variety of applications. It is recommended that you find and use a company that specializes in the manufacture of the type of wheel needed for the material to be processed. Not only will they be able to provide top quality wheels, they will be able to provide the best possible information about which wheel(s) will work best for your application.

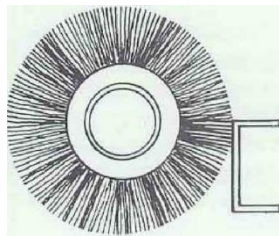
Be aware of contaminating your material by using a dirty or contaminated wheel. Once a wheel has been used on mild steel for example, it can never be used on aluminum. If it is used, it will contaminate the aluminum causing a condition call "after rust". A manufacturer that specializes in wheels will have information on avoiding this condition as well as ways to care for and prolong the life of the brush wheel.

It is recommended to use stainless steel wire when temperatures exceed 200°F. Use bronze or brass wire, or synthetic filament to reduce and or eliminate sparking.

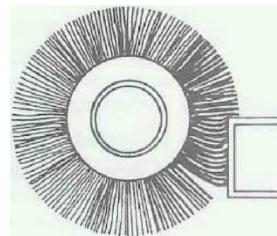
## **Brushing Pressure and Speed**



**WARNING:** Do not install a brush wheel if the spindle R.P.M. exceeds **MAXIMUM SAFE FREE SPEED (MSFS)** for which brush is rated.



**CORRECT PRESSURE**



**EXCESSIVE PRESSURE**

It is very important to be aware of and control the amount of pressure between the brush tips and the working surface as it affects the quality of the work and the brush life. It is the tips of the wire, or filament, that do the work. It is typical to use the brush at the highest practical speed, that does not exceed the brush's Maximum Safe Free Speed while applying the lightest possible pressure. Excess pressure causes excess flexing of the wire or filament which causes premature breakage and results in a wiping action rather than a cutting action.



## 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.

### Operating Functions

1. "START": Push the button marked with "I". (GREEN)
2. "STOP": Push the button marked with "O". (RED)
3. "SPEED SELECTION": Turn the selector knob to the required speed setting position.
4. "EMERGENCY BUTTON": Push this red emergency button in the event of incorrect operation or dangerous conditions, the machine will be stopped immediately. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not start the machine.

### Reset of Overload Protection

After an interruption caused by overload, the reset switch should be pushed to reset machine.

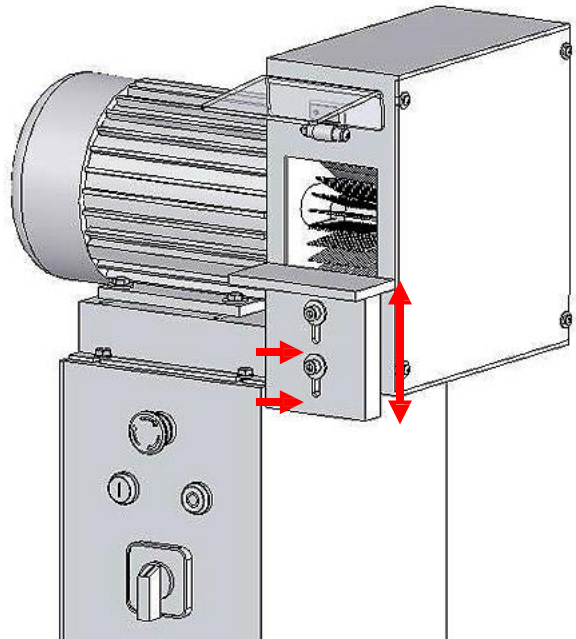
1. Disconnect the machine from the power source.
2. Press the reset switch to reset machine.



**IMPORTANT:** Do not change the rating of overload protection in any situation.

### Operation Set Up

1. Adjust the tool rest by loosening the screws and then raising or lowering the tool rest.
2. Set the tool rest so that the top of the material is at or just below the centerline of the steel wheel. The tool rest gap – must be no greater than 1/8" (3.1mm).
3. Hold the tool rest in position and tighten the mounting screws.





4. Speed selection. Place the selector switch in the speed position most appropriate for the material being used.
  - a. HIGH speed uses the "RABBIT Symbol".
  - b. LOW speed uses the "TURTLE Symbol".
5. Press the GREEN START button and allow the wheel to reach full rpm before feeding material through the wheel.
6. Feed the material
7. When finished or leaving the machine for any reason, press the RED STOP button to stop the motor and wheel. Wait for the wheel to come to a complete stop before leaving the machine.



### **Dust Bag**

Empty the dust bag when it is between 1/2 and 2/3 full.

1. Disconnect the machine from the power supply.
2. Loosen the clamp and remove the dust bag.
3. Empty and dispose of the contents following local rules for such materials as you have been processing.
4. When the dust bag becomes clogged, worn, or damaged, replace with a new bag.



## **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.

### **Before Each Use / Daily**

- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- Ensure area around grinder is clean and well maintained.
- Side guard must cover the spindle, nut and flange and 75% of the steel brush diameter.
- Check the work rest gap – must be no greater than 1/8" (3.1mm) – adjust if necessary.



**Note:** Replace steel brush if work rest gap cannot be adjusted to less than 1/8" (3.1mm).

- Check steel brush for damaged or flawed – replace if necessary.
- Verify the maximum RPM rating of the machine does not exceed the RPM rating on steel brush.
- Eye shields must be clean and in position – replace if cracked or broken.
- Check work rest gap periodically during use – adjust as necessary.
- Tag out machine if a deficiency is found – do not use the machine until the deficiency has been corrected.

### **Weekly**

- 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.

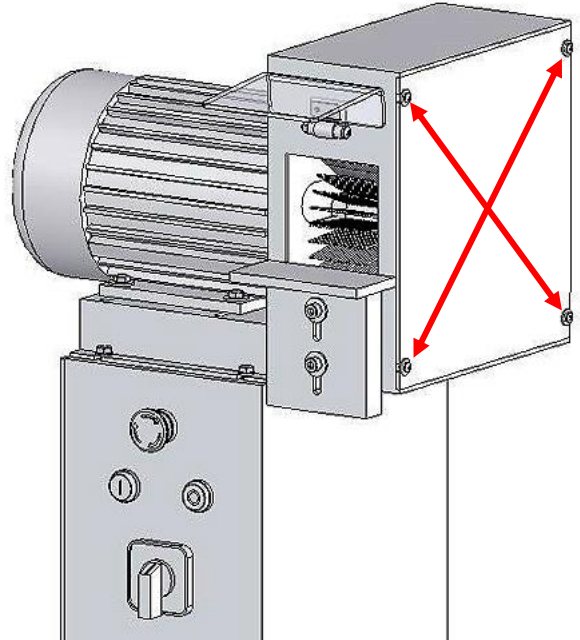




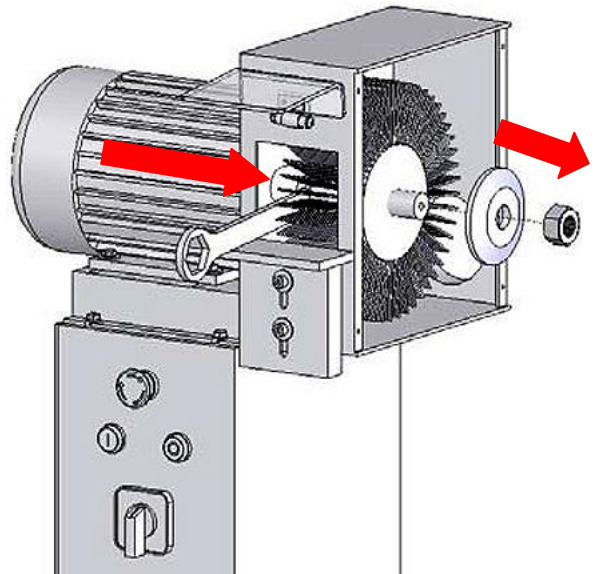
### **Steel Brush Removal and Installation**

Brushes are changed frequently to provide the correct brush for the material being processed. Additionally, reversing the brush periodically will prolong the life of the brush.

1. Disconnect the machine from the power source.
2. Remove the four screws and then the brush cover.



3. Use the included wrench to hold the shaft from turning and then remove the retaining nut and washer.
4. Pull the brush wheel off the spindle.



**WARNING:** Do not install a brush wheel if the spindle R.P.M. exceeds **MAXIMUM SAFE FREE SPEED (MSFS)** for which brush is rated.



**IMPORTANT:** The Maximum Safe Free Speed (MSFS) is the maximum R.P.M. at which the brush should be run with no work applied (spinning free) and is not the recommended operating speed. The recommended operating speed should be determined by the application but should not exceed the MSFS for which the brush is rated. A periodic speed check of the spindle is the operator's responsibility.

5. Install the brush onto the spindle. Verify that the arbor washers are installed properly with one on the inside and the other on the outside of the brush.
6. Install and tighten the nut.





7. Install the brush cover.
8. Check the brush to tool rest gap and adjust as needed so that the gap is no greater than 1/8" (3.1mm).
9. Verify the no person is standing in direct line with the rotation of the brush wheel.
10. Turn on power and run the wheel for 30 to 60 seconds and then turn off power.
11. Disconnect power and inspect that the wheel has remained tight and that the adjustments are still correct. When these items are correct, the machine may be returned to service.

### **Steel Brush Adjustment**

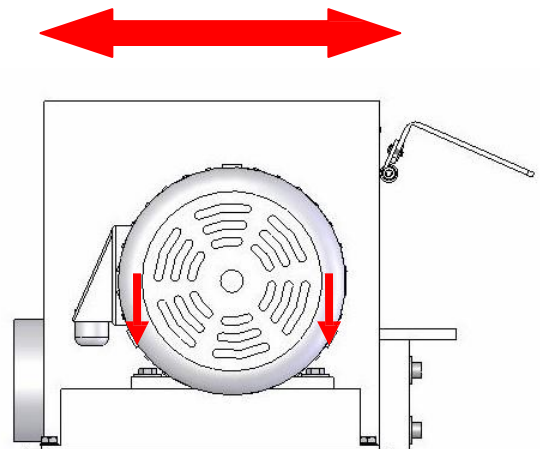
The position of the steel brush is adjusted well by the manufacturer.

1. Disconnect the machine from the power source.
2. Loosen the four motor mounting bolts.



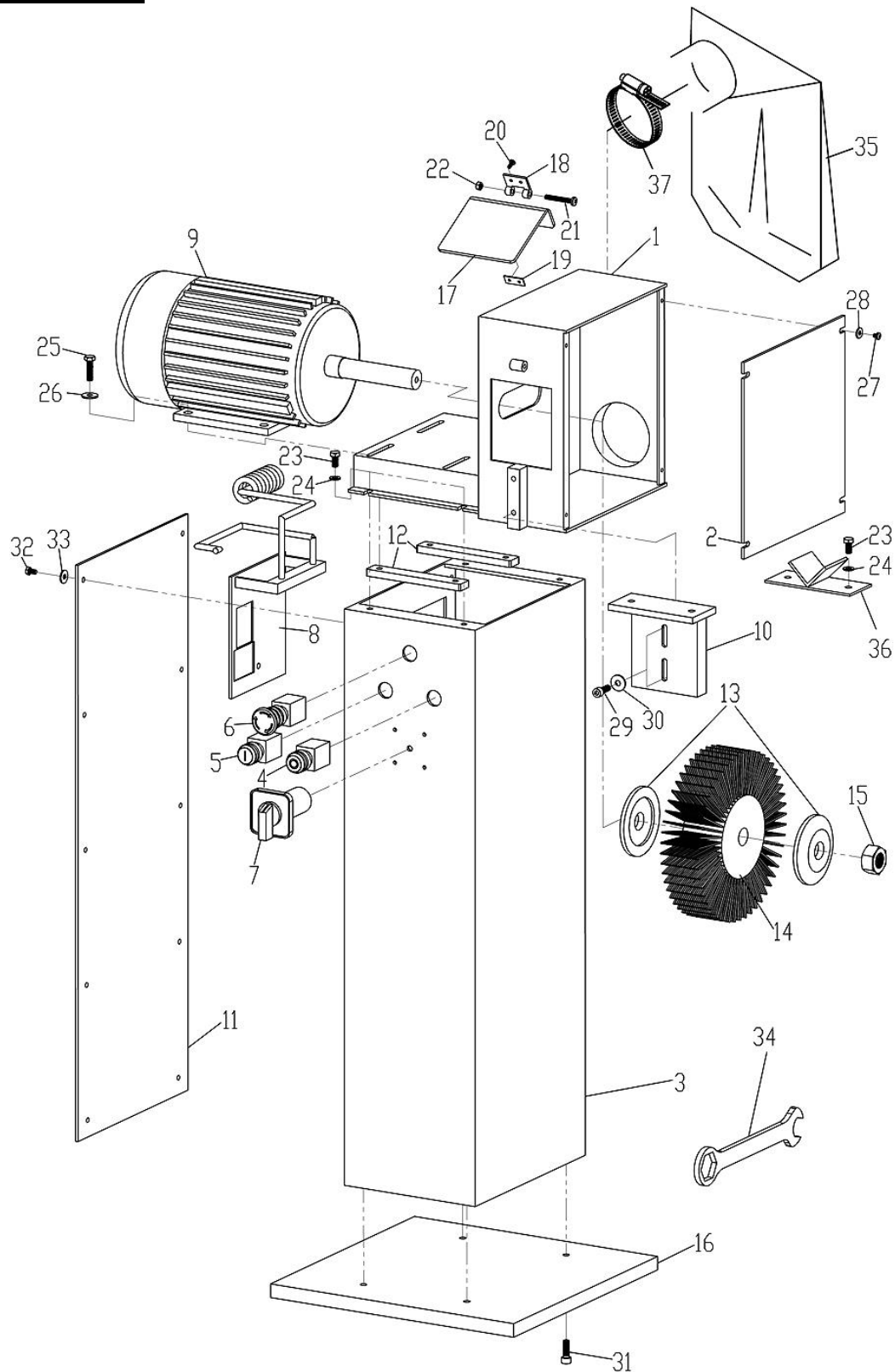
**Note:** Loosen the motor mounting bolts only enough to allow the motor to move. If the bolts are removed, the nut plates that the bolt screw into will fall and possibly damage the electrical components inside of the cabinet. If this happens, remove the base side cover and install the nut plates. Inspect the electrical for any physical damage.

3. Adjust the position of the steel brush to the tool rest to provide the tool rest gap to be no greater than 1/8" (3.1mm).
4. Tighten the four motor mounting bolts.





## PARTS DIAGRAM





## Parts List

Item	Description	Specification	Qty.
1	Frame, Motor and Steel Wheel		1
2	Cover, Steel Wheel		1
3	Stand Body		1
4	Switch, Stop	SB1	1
5	Switch, Start	SB2	1
6	Switch, Emergency Stop	SB3	1
7	Switch, Speed Selector	S.S.	1
8	Switch Set		1
9	Motor		1
10	Tool Rest		1
11	Stand Cover		1
12	Set Plate, Mounting		1
13	Washer, Arbor		2
14	Steel Wheel (Standard / Included)	250 x 60mm x 0.3mm Wire	1
15	Nut	M22	1
16	Stand Base		1
17	Eye Shield		1
18	Hinge		1
19	Set Plate, Hinge Mounting		1
20	Screw	M4 x 10	2
21	Screw	M6 x 45	1
22	Nut	M6	1
23	Screw	M8 x 10	6
24	Washer	M8	6
25	Screw	M8 x 25	4
26	Washer	M8	4
27	Screw	M5X10	4
28	Washer	M5	4
29	Screw	M8X20	2
30	Washer	M8	2
31	Screw	M8 x 25	4
32	Screw	M6 x 16	10
33	Washer	M6	10



Item	Description	Specification	Qty.
34	Combination Wrench, Shaft Retaining		1
35	Dust Bag		1
36	V-Shape Tool Rest		1
37	Band Clamp	Ø4-1/2" (115mm)	1

### **Electrical Components**

Item	Description & Function	Technical Data	Qty.
KM	Contactor-Relay	Coil 400 VAC, 10A	1
SB1	Push Button-On	1, green	1
SB2	Push Button-Off	1, red	1
SB3	Push Button-Emergency	1, red	1
FR	Overload Protection		1
	Supply Cable		1
M	Motor		1
S.S.	Selection Switch		1





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