



# OPERATOR'S MANUAL



## **BELT / DISC SANDER MODEL: DBG-106**

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## THANK YOU & WARRANTY

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

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

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

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

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

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



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

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

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

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

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

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

#### **Summary of Return Policy.**

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

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

#### **For Customer Service & Technical Support:**

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



## **INTRODUCTION**

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

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

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

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

## **GENERAL NOTES**

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

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

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



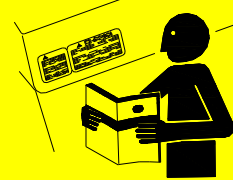
**Note:** This symbol refers to useful information throughout the manual.



## IMPORTANT

### PLEASE READ THIS OPERATORS MANUAL CAREFULLY

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



## SAFETY INSTRUCTIONS

### LEARN TO RECOGNIZE SAFETY INFORMATION

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

Follow recommended precautions and safe operating practices.

### UNDERSTAND SIGNAL WORDS

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

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

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



**DANGER**



**WARNING**



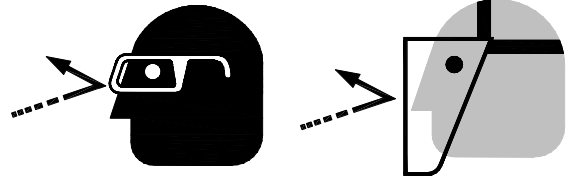
**CAUTION**





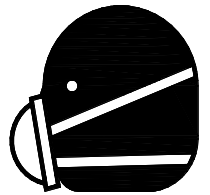
### **PROTECT EYES**

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



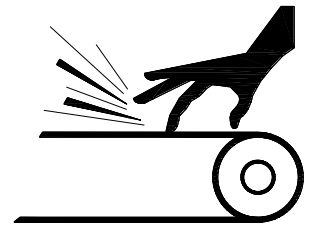
### **DUST HAZARD**

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.



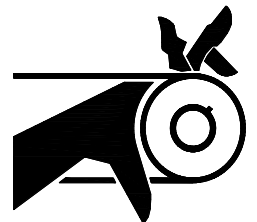
### **MOVING BELT ABRASIONS**

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



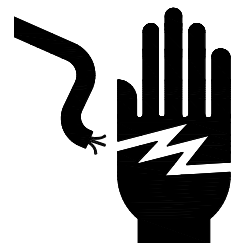
### **MOVING BELTS CAN CRUSH AND DISMEMBER**

**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.**





## **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.**

## **SAFETY REQUIREMENTS for ABRASIVE SANDING MACHINE**



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

Abrasive sanding can be hazardous to operators and bystanders. Sanding sparks, chips, and dust particles thrown off by the sanding disc can cause serious injury if contacted or inhaled. To avoid such injuries you must comply with the following safety requirements:

1. **Use eye and ear protection.** Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
2. **Wear** leather safety gloves, arm guards, leather aprons, and safety shoes.
3. **A dust collection system is recommended,** The operator should also wear a dust mask at all times.
4. Additional precautions may be necessary for sanding materials which are flammable or have other hazardous properties. You should always consult the manufacturer of such materials for instructions on sanding and handling.
5. **Before sanding,** always allow the motor to come up to operating speed, then check the sanding disc for wobble, run out, or any unbalanced condition. If the disc is not operating accurately and smoothly, immediately stop the motor and make repairs before attempting any sanding operations.
6. Abrasive discs must be stored in a controlled environment area. Relative humidity should be 35% to 50% and the temperature should be between 60° and 80° fahrenheit. Failure to do so could cause premature disc failure.





7. Examine the face of the sanding disc carefully. Excessive sanding that wears down to the backing material can tear the disc. Never use a disc which shows backing, nicks or cuts on the surface or edge or damage due to creasing or poor handling.
8. When installing a new disc, be certain the disc is accurately centered on the drive wheel. Failure to do so could cause a serious unbalanced condition.
9. Always present the piece part to the wheel while resting the piece part firmly on the table. Failure to do so could result in damage to the piece part or throwing the piece part off the wheel.
10. Personal hearing protection such as ear plugs or ear muffs should be used to protect against the effect of noise exposure.
11. Only trained and qualified personnel can operate this machine.
12. Make sure guards are in place and in proper working order before operating machinery.
13. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
14. **Keep work area clean.** Cluttered areas invite injuries.
15. **Overloading machine.** By overloading the machine you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
16. **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.
17. **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.
18. **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.
19. Do not overreach. Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
20. **Stay alert.** Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
21. **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.
22. **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.
23. **Keep children away.** Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.



24. **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.
25. **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.
26. Wear oil-free protective garments such as leather gloves, heavy shirt, high shoes or boots, cuffless trousers, and a cap.
27. **DO NOT** touch live electrical components or parts.
28. **Turn off power** before checking, cleaning, or replacing any parts.
29. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
30. Keep all cords dry, free from grease and oil, and protected from sparks and dust.
31. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill!**
32. **DO NOT** bypass or defeat any safety interlock systems.
33. Keep visitors a safe distance from the work area.

### **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.





## **TECHNICAL SPECIFICATIONS**

DBG-106	Imperial	Metric
Belt Size (L x W)	48" x 6"	1220mm x 152mm
Belt Speed (ft. / min.)	1,653 fpm	503.8 mpm
Table Dimensions	6" x 10.5"	152mm x 266mm
Disc Diameter	9.84"	250mm
Disc Speed	2,100 rpm	
Disc Table Dimensions	7.5" x 13"	190mm x 330mm
Chamfer Angle	15 degrees	
Max. Chamfer @ 15°	.177"	4.5mm
Motor	1.5 hp	1.11 kw
Power Requirements	110V	240V
Shipping Dimensions (L x W x H)	29" x 17" x 17"	737mm x 432mm x 432mm
Shipping Weight	335 lbs.	152 kg.

Specifications subject to change without notice

## **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@baileighindustrial.com](mailto:sales@baileighindustrial.com), Phone: 920.684.4990, or Fax: 920.684.3944.



**Note:** The photos illustrations using 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 in one box. Remove the machine from the packing material and check over carefully. Make certain all items are accounted for before discarding any packing material.



**WARNING:** If any parts are missing, do not plug in the power cable, or turn the power switch on until the missing parts are obtained and installed correctly.

## **Cleaning**

Your machine may be shipped with a rustproof waxy oil coating and grease on the exposed unpainted metal surfaces. To remove this protective coating, use a degreaser or solvent cleaner. 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.



**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.





## OVERALL DIMENSIONS

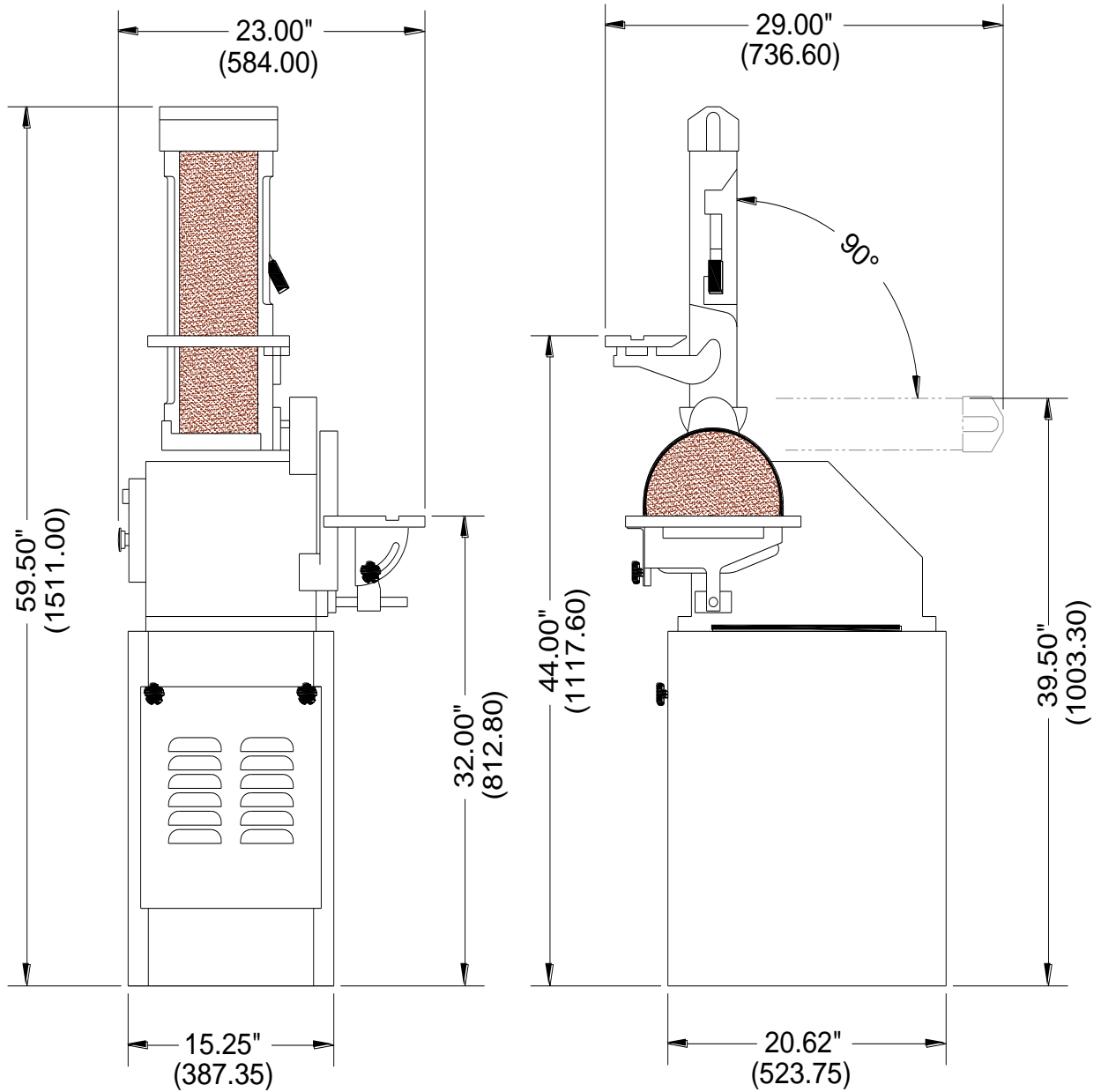
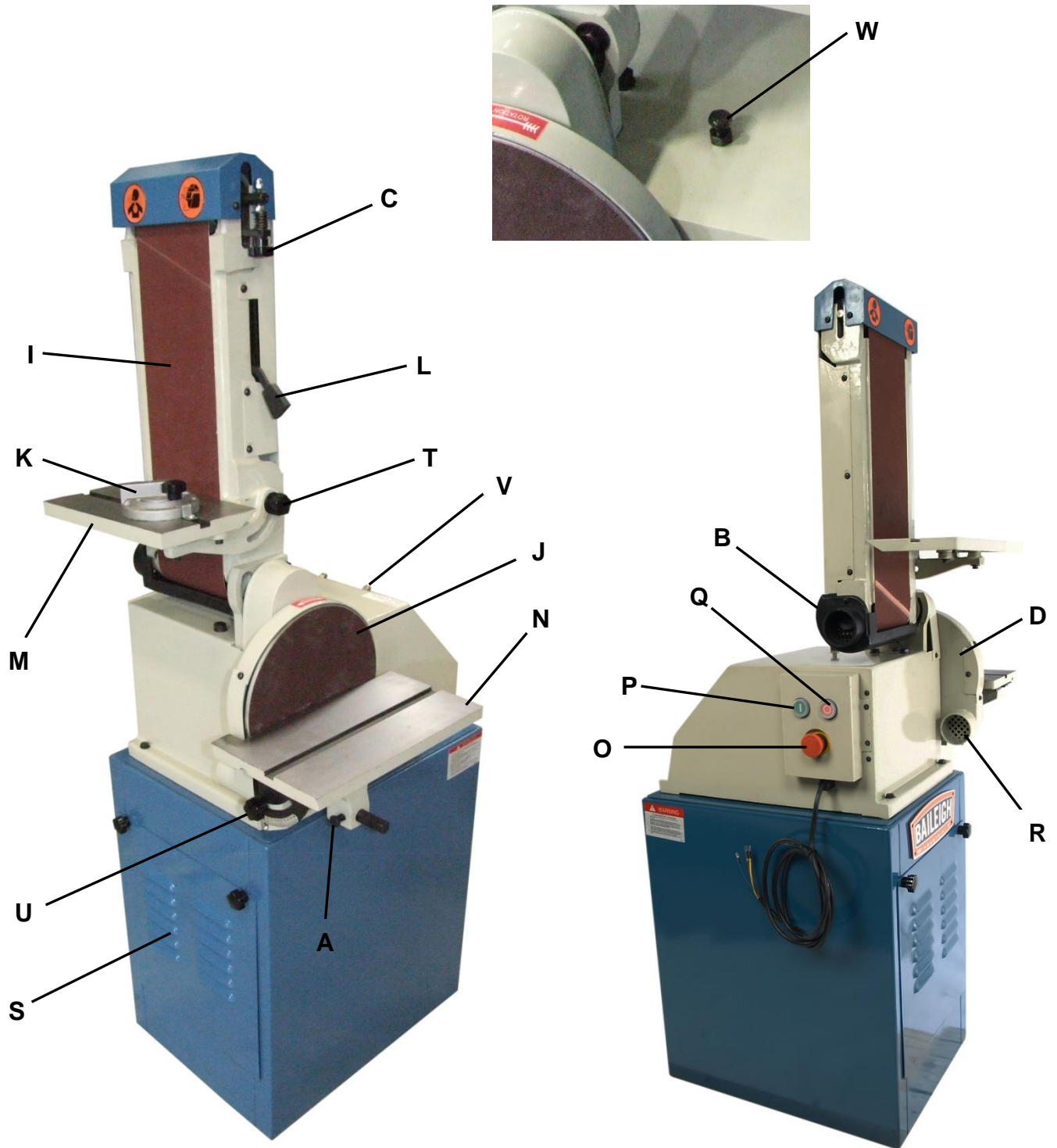


figure 1



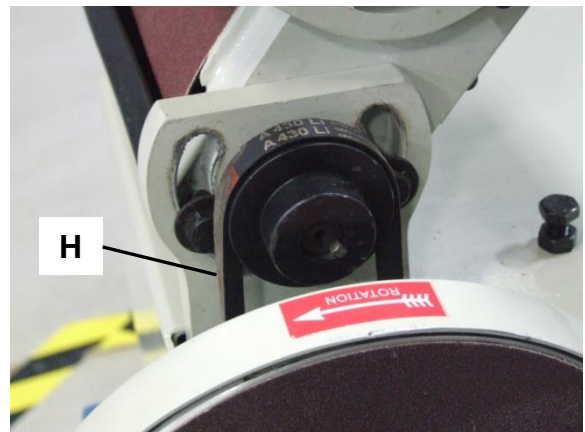
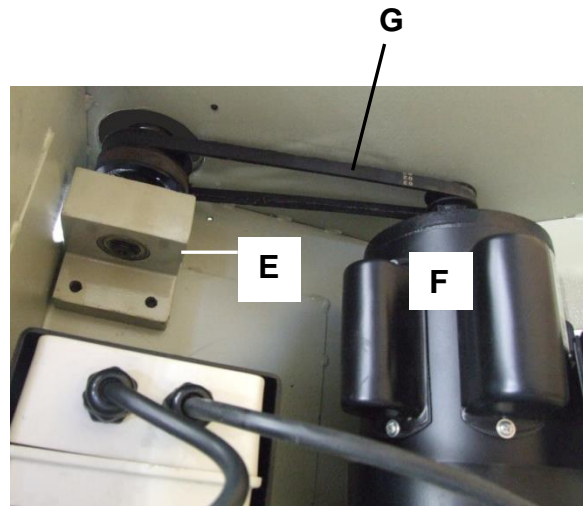
## GETTING TO KNOW YOUR MACHINE







Item	Part Name
A	Table Adjustment Bolt
B	Plastic Dust Chute
C	Tracking Knob
D	Disc Shroud
E	Bearing Block
F	Drive Motor
G	Main Drive Belt (L-630)
H	Auxiliary Drive Belt (L-430)
I	Sanding / Grinding Belt
J	Sanding / Grinding Disc
K	Miter Gauge
L	Belt Tightener Knob
M	Belt Table
N	Disc Table
O	Emergency Stop Button
P	Start Button
Q	Stop Button
R	Dust Outlet
S	Panel (Remove to bolt stand to floor)
T	Table Adjustment Knob
U	Table Angle Adjustment Gauge
V	Motor Adjustment Bolts
W	Belt Arm Adjustment Bolt





## **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.

### **Motor Specifications**

Your tool is wired for 110 volt, 60Hz alternating current.

### **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**

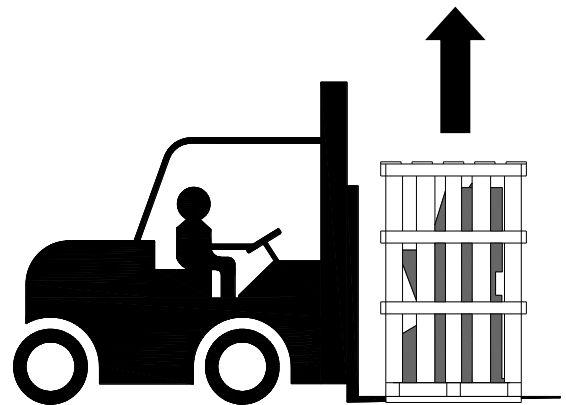
Extension cord should be in good condition and meet the minimum wire gauge requirements listed below:

AMP RATING	LENGTH		
	25ft	50ft	100ft
0-6	16	16	16
7-10	16	16	14
11-12	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.

### **TRANSPORTING AND LIFTING**

**⚠ CAUTION:** 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. Choose a location that will keep the machine free from vibration and dust from other machinery. Keep in mind that having a large clearance area around the machine is important for safe and efficient working conditions.



**Follow these guidelines when lifting:**

- Use lift equipment such as straps, chains, capable of lifting 1.5 to 2 times the weight of the machine.
- Take proper precautions for handling and lifting.
- Check if the load is properly balanced by lifting it an inch or two.



- Lift the machine, avoiding sudden accelerations or quick changes of direction.
- Locate the machine where it is to be installed, and lower slowly until it touches the floor.
- 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 no rocking is taking place.



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

## **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.
- **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.



## **OPERATING INSTRUCTIONS and ADJUSTMENTS**

These sanders can be used to remove stock from a wide variety of machinable materials. Different materials require different grit types and grades to achieve the desired stock removal rate and surface finish. Please consult with your abrasive materials supplier for specific recommendations on the correct grit material and grade required for your specific needs. When removing stock from soft materials (wood, plastic, etc.) these machines are typically called "sanders." When removing stock from hard materials (cast iron, steel, etc.) they are referred to as "grinders".

### **Belt Sander**

The sanding belt must be in good condition, at proper tension, and tracking correctly, before doing any sanding, grinding or other abrasive machining operations. Refer to the section on Track Mechanism Maintenance if you have any problems with belt tension or tracking.

### **Adjusting the Belt Sander Table**

You can tilt the table from a horizontal position to a 45° downward angle or any angle in between. A single locking knob on the side of the table is used to lock and unlock the table for adjustment.



figure 1

**⚠ CAUTION: NEVER ADJUST THE TABLE ANGLE WHILE THE SANDER IS RUNNING. ALWAYS TURN THE MOTOR OFF BEFORE ADJUSTING THE TABLE ANGLE.**

### **Adjusting the Belt Sander Arm**

The belt sander arm can be adjusted from a vertical position to a horizontal position or anywhere in between. To tilt the table, loosen the two bolts as indicated by the arrows in (fig. 1) using a 16mm wrench. (It is not necessary to remove the guard to pivot the table) When set at the desired angle, re-tighten the two bolts.



(shown with guard removed)

figure 2





**⚠ CAUTION: NEVER ADJUST THE ARM ANGLE WHILE THE SANDER IS RUNNING. ALWAYS TURN THE MOTOR OFF BEFORE ADJUSTING THE ARM ANGLE.**

To set the arm to an angle between horizontal and vertical use a machinist's protractor. Re-tighten both lock bolts to secure the arm.

(Fig. 3) shows the table still attached. It can be pivoted if desired or completely removed depending on the intended application.

### **Adjusting the Disc Sander Table**

Loosen the locking knob underneath the table as shown in (fig. 4). Using the pointer and scale, set the angle between 0° and 45° downward as needed. Lock the knob when the desired angle is shown on the scale.

**⚠ CAUTION: NEVER ADJUST THE TABLE ANGLE WHILE THE SANDER IS RUNNING. ALWAYS TURN THE MOTOR OFF BEFORE ADJUSTING THE TABLE ANGLE.**

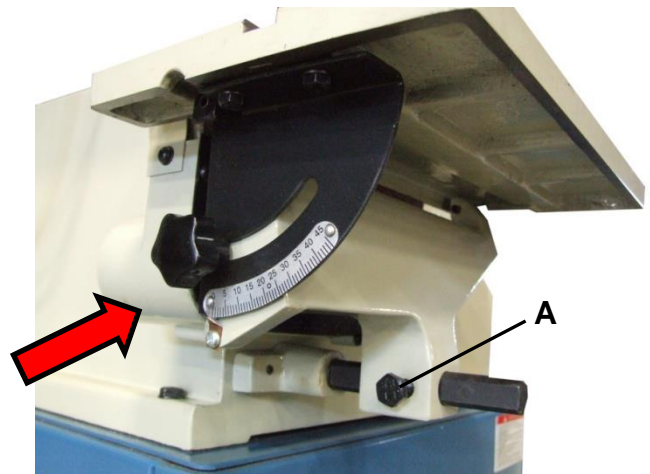


figure 4

The distance between the disc and the edge of the table can also be adjusted by loosening bolt (A) and sliding the table assembly either in or out. The table can also be removed when replacing the sanding / grinding disc.

### **Using the Miter Gauge**

The miter gauge can be used on either the disc or belt surfaces to sand or grind accurate angles on the piece part. When using the gauge alone, you can sand or grind a single angle. However, by tilting the table and



figure 5





using the miter gauge in combination with the table tilt, it is possible to do compound angles as well.

When grinding a compound angle you should always check the accuracy of your setup by sanding a piece of scrap material before doing any finish sanding on the actual work piece.

## **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.

### **Sanding / Grinding Belt Replacement**

1. Disconnect power to the machine to prevent accidental start-ups. If the machine is plugged into an outlet, unplug it. If the machine is hardwired to a branch circuit with a junction box, remove the fuse or trip the circuit breaker to the branch.
2. Take off the bottom cover by removing (8) screws, and the top end cover held on with (4) screws. (see fig. 6)
3. Lower the arm to a horizontal position and take off the plastic dust chute (**B**) by removing two screws as indicated in (fig. 7).
4. Release the belt tension by sliding the tension handle to the right (See fig. 8).

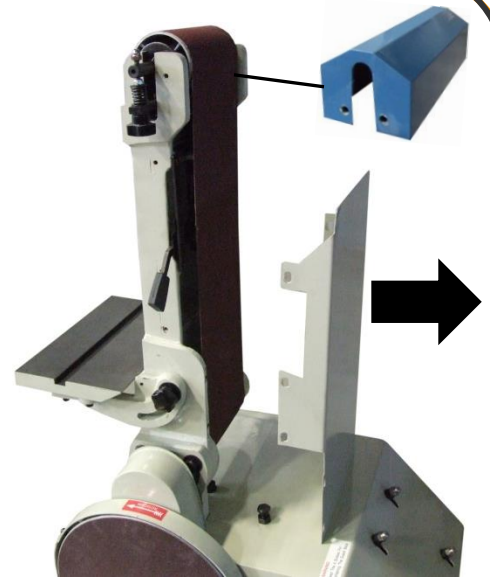


figure 6

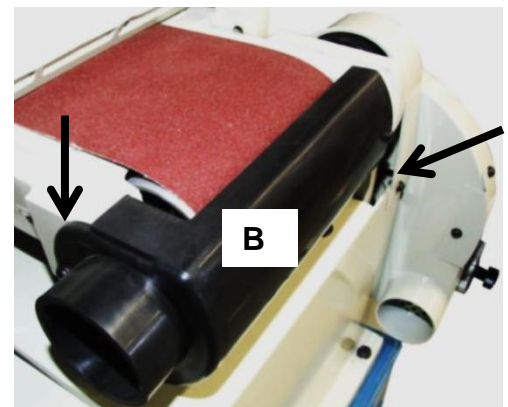


figure 7



figure 8



5. Remove the belt.
6. Check the drums and platen for scoring or signs of wear which might require service or replacement.
7. Check the drums for looseness which might cause tracking problems. Correct any loose condition by tightening or replacing any parts as required.
8. Slide the new belt onto the drums and platen. (Check that the direction arrows on the inside of the belt match the direction that the motor turns.
9. Slide the tension handle to the left to tighten the belt, making sure the belt stays centered on the drums.
10. Turn the drums by hand to see if the belt tracks true. JUST BECAUSE THE OLD BELT TRACKED CORRECTLY DOES NOT MEAN THE NEW BELT WILL. Always check the tracking when replacing a belt.

### **Tracking Adjustment**

1. To adjust the tracking, power up the machine.
2. Jog the motor on and off to observe the tracking, and turn the tracking knob as necessary to make the belt track in the center of the platen and drums. Turn the tracking knob (C) clockwise (**cw**) to move the belt to the right, and counterclockwise (**ccw**) to move the belt toward the left.
3. When the belt seems to be tracking correctly, turn the motor on and leave it running while fine tuning the tracking.
4. When satisfied, turn the motor **OFF**, and re-attach the plastic dust chute, the top end cover, and the bottom cover.

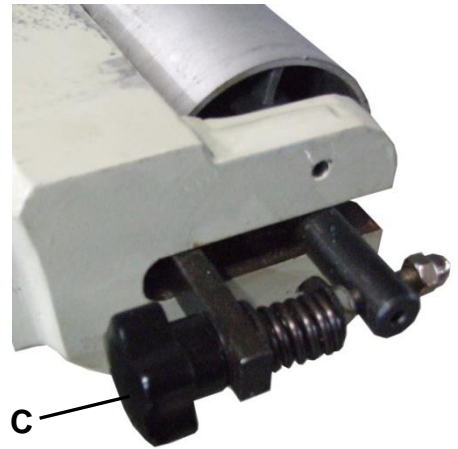


figure 9

### **Installing Abrasive Discs**

1. Disconnect power to the machine to prevent accidental start-ups.
2. Peel off the old abrasive disc.
3. Clean the drive disc surface using naphtha or a similar nonflammable solvent that will dry film-free.
4. Pull the protective backing half off the new abrasive disc.
5. Position the new disc carefully so it is centered accurately on the drive disc.
6. When accurately centered, remove the rest of the protective backing and press the abrasive disc firmly against the drive disc so complete adhesive contact is made.
7. Reconnect power to the machine.



## **Replacing the V-Belts**

**It is recommended to change both belts at the same time.**

1. Disconnect power to the machine to prevent accidental start-ups.
2. Remove the two tables (**M**) & (**N**) from the machine.
3. Remove the disc plate (fig. 10). First remove the black plate at the bottom of the shroud (already shown removed). To get at the 3mm setscrew, remove the access plate, loosen the setscrew and pull the plate off the shaft.
4. Remove the disc shroud (**D**) held on with (4) screws (fig. 11).
5. At this point you will need to remove the sander / grinder machine from the stand. Lower the belt sanding arm to a horizontal position and tighten the two bolts to lock it into position.
6. Remove the (4) bolts, washers, and nuts holding the sander to the stand. (To get access to the nuts, remove the back panel on the stand.
7. Carefully remove the sander / grinder from the stand and place on the floor or a sturdy work surface. Be careful not to damage the control buttons.
8. Release the tension on the two V-belts. (Fig. 12) shows the adjustment nuts for the motor belt and (fig. 13) shows the adjustment bolts for the auxiliary belt.

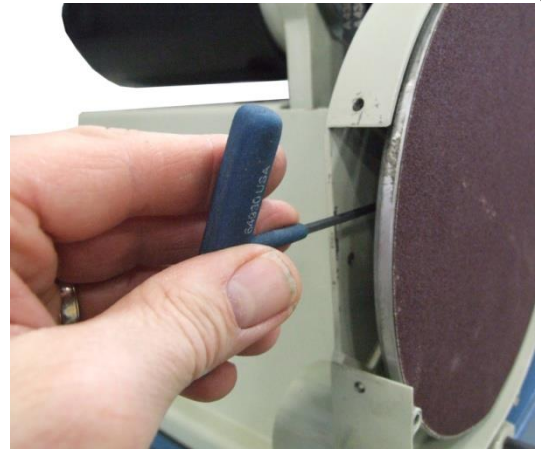


figure 10

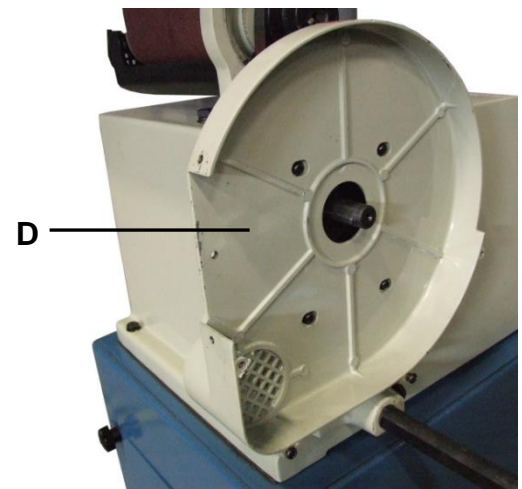


figure 11

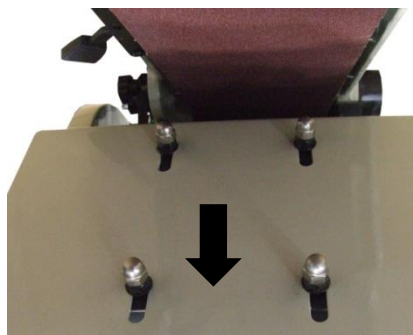


figure 12

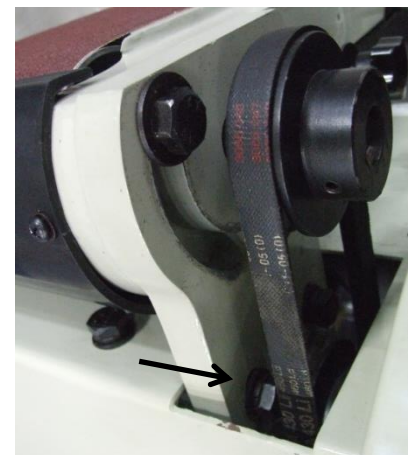


figure 13





9. Remove the (3) bolts holding on the bearing block (E).
10. Remove the two V-belts and replace with new ones.
11. Re-install the bearing block.
12. Tension the motor belt so that when pressed, in the middle of its travel, it has no more than one belt's width of movement. Tighten the (4) motor adjustment nuts. (Check belt alignment and re-adjust if necessary).

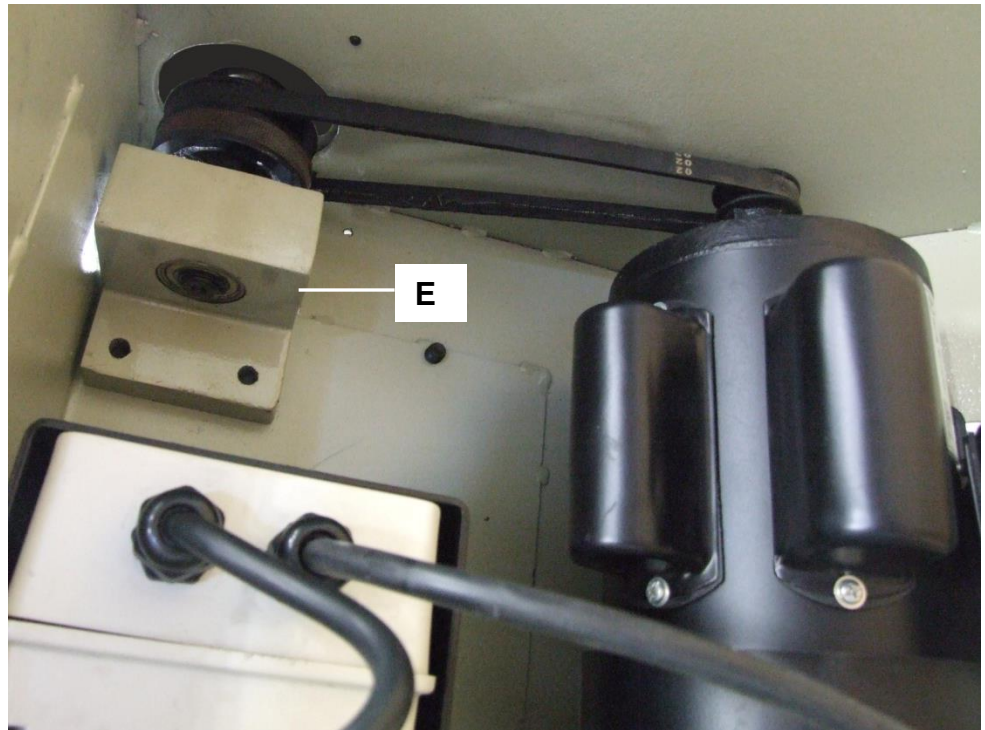


figure 14

13. Place the sander / grinder back onto the stand, replace the (4) bolts and nuts, and tighten securely.
14. Re-tighten the adjustment bolts for the auxiliary V-belt. (Check alignment)
15. Re-install the small V-belt belt guard.
16. Install the tables back onto the sander / grinder.
17. Verify that all parts have been re-installed and tightened properly. Make sure no loose tools have been left on the machine.
18. Re-establish electrical power to the **DBG-106** sander / grinder.



## **MACHINE SETUP**

### **Mounting**

1. Position the **DBG-106** where it will be located on the shop floor. When positioning the machine, consider the type of work which will be done on it so you allow sufficient room, not only for the piece parts, but also for service to the machine.
2. Open the door in the base of the machine, and using the holes in the base as a template, mark the floor for the position of the hold-down bolts.
3. Move the machine to expose the hold-down bolt marks and install anchors for the hold-down bolts.
4. Put the machine back over the hold-down anchors and bolt the machine securely to the shop floor. **THIS MUST BE DONE FOR SAFE OPERATION OF THE MACHINE.**
5. Establish an electrical service connection to the machine.



**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.**

### **Disc Table Angle Adjustment**

1. Disconnect power to the machine to prevent accidental start-ups.
2. Loosen the table locking knob on the side of the disc table.
3. Using a square against the table and disc, set the table at exactly 90° to the disc (See Figure 15).
4. Tighten the table locking knob.
5. Check the pointer. If it is not exactly on the zero mark, loosen the pointer attaching screw, adjust the pointer, and retighten the screw.
6. Reconnect electrical power to the machine.

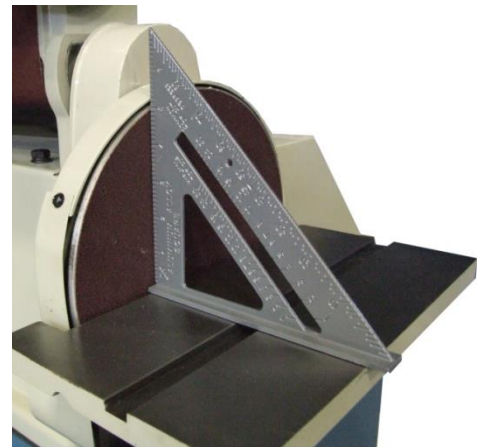


figure 15

### **Disc Table Miter Parallelism**

1. Disconnect power to the machine to prevent accidental start-ups.
2. From each end of the table, measure the distance from the miter slot to the sanding /grinding disc.



3. If an adjustment is required, loosen the (4) hex attachment screws under the table and move the table until the dimensions are equal at both ends.
4. Tighten the (4) adjustment screws.
5. Reconnect electrical power to the machine.

#### **Disc Table Gap Adjustment**

1. Disconnect power to the machine to prevent accidental start-ups.
2. Using a scale, check the gap between the edge of the table and the sanding / grinding disc. It should be set to  $\frac{3}{32}$ " (2.36mm).
3. To set the distance, loosen the bolt as indicated by the arrow in (fig. 16).
4. When re-tightening the bolt also check that the table is level from left to right.
5. Reconnect electrical power to the machine.

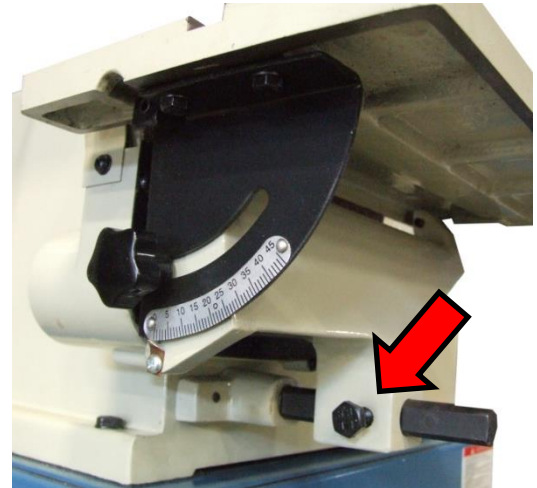


figure 16

#### **Belt Table Miter Slot Parallelism Adjustment**

1. Disconnect power to the machine to prevent accidental start-ups.
2. From each end of the table, measure the distance from the miter slot to the sanding /grinding belt.
3. If an adjustment is required, loosen the (3) socket head attachment screws under the table and move the table until the dimensions are equal at both ends. At the same time, set a distance of  $\frac{3}{32}$ " (2.86mm) between the table edge and the belt.
4. After adjustment tighten the (3) socket head adjustment screws.
5. Reconnect electrical power to the machine.





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

Maintenance should be performed on a regular basis by qualified personnel.

Always follow proper safety precautions when working on or around any machinery.

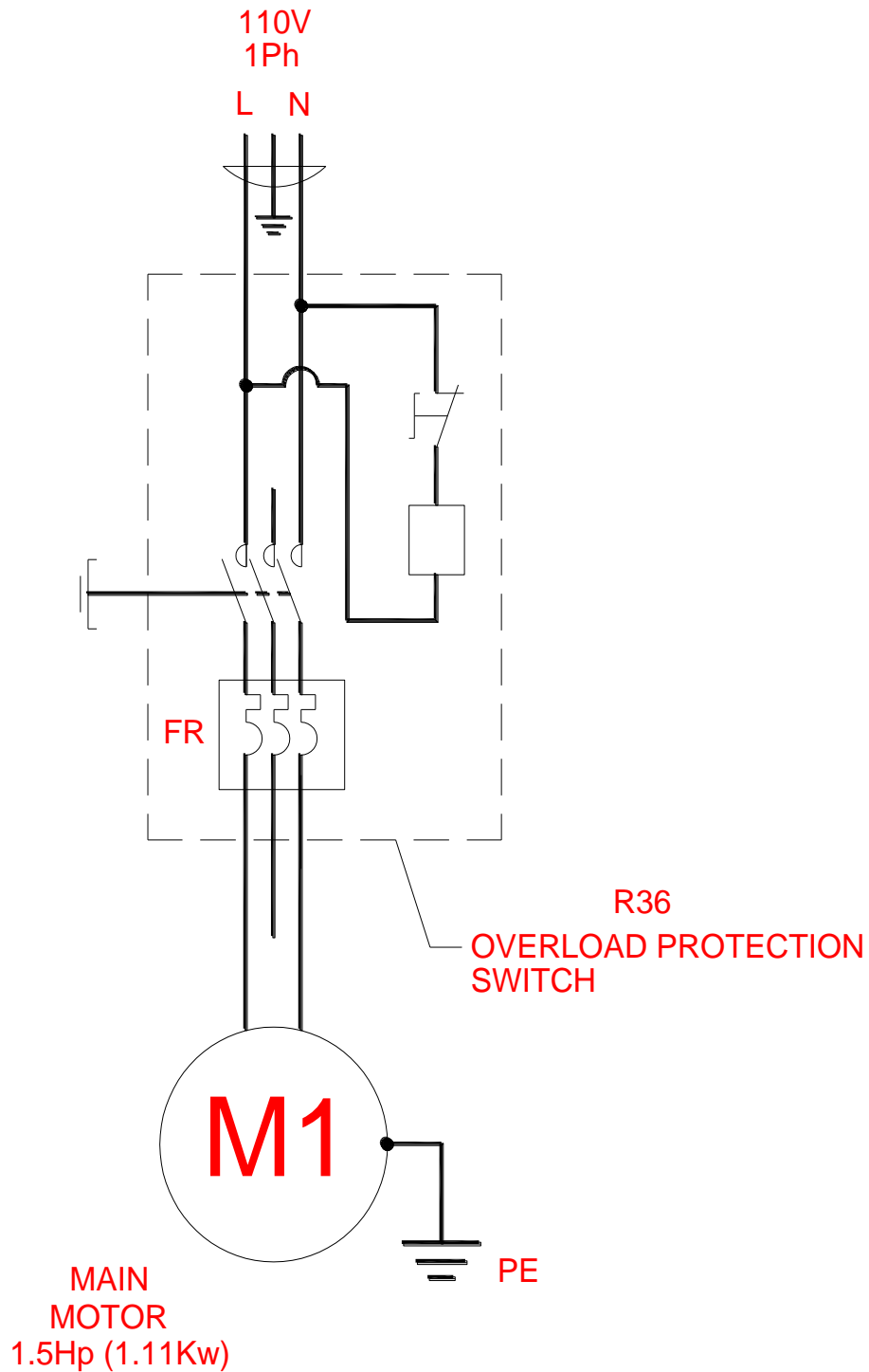
- Check daily for any unsafe conditions and fix immediately.
- Check that all nuts and bolts are properly tightened.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.



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

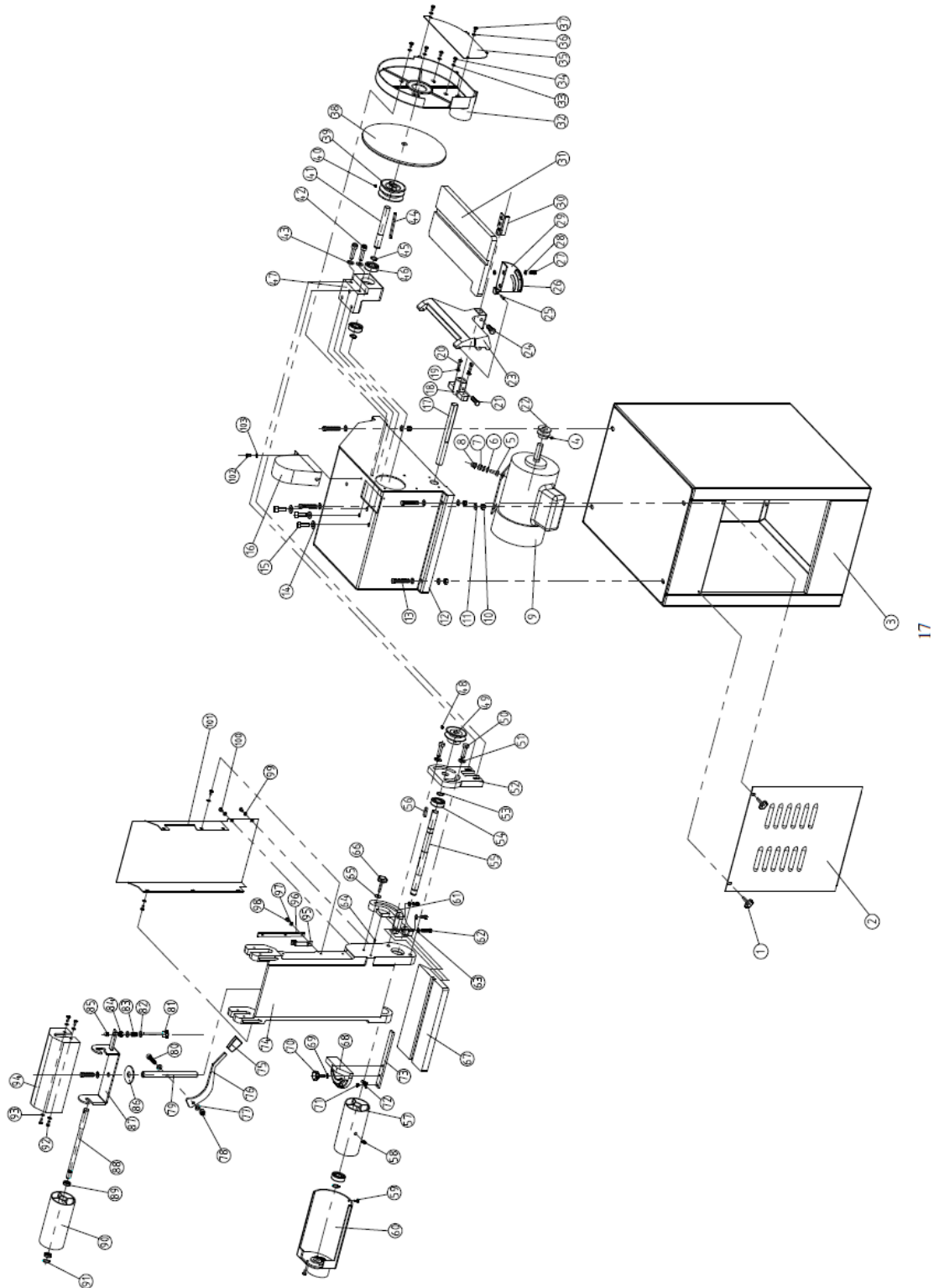


## ELECTRICAL SCHEMATIC





## PARTS IDENTIFICATION DRAWING





## **PARTS IDENTIFICATION LIST**

Item	Description	Qty
1	Knob M6 x 15	2
2	Coolant Cover	1
3	Stand	1
4	Lock Nut M6 x 8	1
5	Hex Bolt M8 x 20	4
6	Flat Washer 8mm	8
7	Hex Bolt M8	4
8	Nut M8	4
9	Motor	1
10	Hex Nut M8	4
11	Flat Washer 8mm	8
12	Stand for Motor	1
13	Hex Bolt M8 x 50	4
14	Flat Washer 10mm	3
15	Hex Bolt M10 x 25	3
16	Belt Cover	1
17	Connecting Shaft	1
18	Fixed Seat	1
19	Flat Washer 6mm	2
20	Hex Bolt M6 x 20	2
21	Hex Bolt M8 x 20	1
22	Belt Wheel 3	1
23	Table Stand	1
24	Hex Bolt M10 x 25	1
25	Spring Column Pin 6 x 40	1
26	Scale	1
27	Hex Bolt	4
28	Flat Washer	8
29	Stand 2	1
30	Adjusting Stand	1
31	Table	1
32	Guard Cover	1
33	Flat Washer	4



Item	Description	Qty
34	Phillips Head Screw M5 x 6	4
35	Block Plate	1
36	Flat Washer	4
37	Phillips Head Screw M5 x 6	4
38	Grinding Wheel Disc	1
39	Belt Wheel 1	1
40	Flat Lock Screw M6 x 8	1
41	Belt Wheel Shaft	1
42	Hex Bolt M10 x 25	2
43	Flat Washer 10mm	2
44	Key 5 x 5 x 75	1
45	Spring Ring 17 for Shaft	2
46	Bearing	2
47	Supporting Stand	1
48	Spring Ring for Shaft 17	1
49	Belt Wheel 2	1
50	Hex Bolt M10 x 40	2
51	Flat Washer 10mm	2
52	Swivel Stand	1
53	Spring Ring for Shaft 17	4
54	Bearing	2
55	Lower Wheel Shaft	1
56	Key 5 x 5 x 32	1
57	Lower Idler Wheel	1
58	Flat Lock Screw M8 x 10	2
59	Phillips Head Screw M5 x 16	2
60	Dust Box	1
61	Table Stand	1
62	Hex Bolt	3
63	Flat Washer	3
64	Spring Column Pin 4 x 40	1
65	Big Washer	1
66	Knob M6 x 35	1
67	Table	1



Item	Description	Qty
68	Scale Plate	1
69	Flat Washer	1
70	Knob	1
71	Phillips Head Screw M5 x 6	1
72	Pointer	1
73	Sliding Pole	1
74	Supporting Body	1
75	Adjusting Handle Sleeve	1
76	Adjusting Handle	1
77	Flat Washer	2
78	Hex Nut M8	2
79	Adjusting Shaft	1
80	Hex Bolt	1
81	Knob	1
82	Flat Washer	2
83	Small Pressing Spring	1
84	Hex Nut M6	1
85	Nut M6	1
86	Washer	1
87	Adjusting Stand	1
88	Upper Idler Wheel Shaft	1
89	Bearing	2
90	Upper Idler	1
91	Spring Ring for Shaft 12	2
92	Phillips Head Screw M5 x 16	4
93	Washer	4
94	Upper Cover	1
95	Small Pressing Plate	1
96	Pressing Plate	1
97	Phillips Head Screw M5 x 10	2
98	Flat Washer 5	2
99	Phillips Head Screw M5 x 6	8
100	Flat Washer 5	8





Item	Description	Qty
101	Guard Cover	1
102	Phillips Head Screw M5 x 6	2
103	Flat Washer 5	2
Belt A	Motor to Pulley, A-630	1
Belt B	Pulley to Pulley, A-430	1



## TROUBLESHOOTING



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

FAULT	PROBABLE CAUSE	REMEDY
Motor will not run	<ol style="list-style-type: none"> <li>1. Motor is defective.</li> <li>2. Voltage is too low.</li> <li>3. Switch is defective</li> <li>4. Branch circuit fuse is blown or the circuit breaker is tripped.</li> <li>5. Branch is shut down for service.</li> <li>6. Open circuit in the wiring</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the motor.</li> <li>2. Check the power supply for the proper voltage.</li> <li>3. Replace the switch.</li> <li>4. Determine the reason for the blown fuse or tripped circuit breaker -- then replace the fuse or reset the breaker.</li> <li>5. Check all personnel and machines on the branch to be certain someone has not shut down the branch for service. DO NOT replace the fuse or reset the breaker unless you are certain no personnel are working on the machines, wires or controls in the circuit.</li> <li>6. Inspect all the wire connections for loose or open connections.</li> </ol>
Motor Stalls Easily	<ol style="list-style-type: none"> <li>1. Low Voltage.</li> <li>2. Improper wiring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for proper voltage at the motor – correct as necessary.</li> <li>2. Check for proper connections.</li> </ol>
Abrasive belt or disc slows down although motor keeps running at working speed.	<ol style="list-style-type: none"> <li>1. Belt is slipping.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the belt.</li> </ol>
Poor Tracking	<ol style="list-style-type: none"> <li>1. Tracking is out of adjustment.</li> <li>2. Too much belt tension.</li> <li>3. Not enough belt tension.</li> <li>4. Belt is jointed improperly.</li> <li>5. Lack of crown on the drive roller.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the belt tracking.</li> <li>2. Loosen the tension until the belt is just taut.</li> <li>3. Tighten the tension until the belt is more taut.</li> <li>4. Check the belt for an irregular seam or shape.</li> <li>5. Remove the belt and put a straight edge along the drive roller. There should be a slight crown (high spot toward the middle of the roller). If the crown has worn away, replace the roller</li> </ol>



FAULT	PROBABLE CAUSE	REMEDY
Poor Tracking (cont.)	6. Worn Bearings	7. Check all the bearings for excessive heat.
Unsteady Belt	1. Slack in the abrasive belt.	1. Adjust the belt tension.
Short Belt Life	1. Excessive pressure applied while grinding.  2. Working on only one side of the belt or only one area of the disc.  3. Incorrect abrasive material or grit size.	1. Allow the belt to do the cutting. Excessive pressure only dulls the grit and removes it from the cloth.  2. Use all the surface areas of the abrasive cloth.  3. Check with your abrasives supplier for recommendations on the type and coarseness of the abrasive required for the piece parts you are sanding and grinding.
<b>CAUTION:</b> For all of the electrical faults and corrections in the above table we recommend the use of a qualified and licensed electrician for all circuit tracing, diagnosis, and repair.		

## NOTES



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