

# 1" x 42" Belt / 8" Disc Sander



## Operator's Manual

Record the serial number and date of purchase in your manual for future reference.

Serial Number: \_\_\_\_\_ Date of purchase: \_\_\_\_\_

For technical support or parts questions, email [techsupport@rikontools.com](mailto:techsupport@rikontools.com) or call toll free at (877)884-5167

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## SPECIFICATIONS

Model Number	50-144
Belt Size	1" x 42"
Belt Speed	3,000 FPM
Disc Size (PSA)	8"
Disc Speed	1,725 RPM
Dust Ports (2)	1-3/4" & 2"
Motor HP	5/8 HP
Motor Volts / Amps / Hertz	120V / 5.8A / 60 Hz
Net Weight	59.5 lbs

**This owner's manual is not a teaching aid and is intended to show assembly, adjustments, and general use.**

**NOTE:** The specifications, photographs, drawings and information in this manual represent the current model when the manual was prepared. Changes and improvements may be made at any time, with no obligation on the part of Rikon Power Tools, Inc. to modify previously delivered units. Reasonable care has been taken to ensure that the information in this manual is correct, to provide you with the guidelines for the proper safety, assembly and operation of this machine.

# SAFETY INSTRUCTIONS

**IMPORTANT!** Safety is the single most important consideration in the operation of this equipment. **The following instructions must be followed at all times.** Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.

There are certain applications for which this tool was designed. We strongly recommend that this tool not be modified and/or used for any other application other than that for which it was designed. If you have any questions about its application, do not use the tool until you have contacted us and we have advised you.

## SAFETY SYMBOLS



**SAFETY ALERT SYMBOL:** Indicates DANGER, WARNING, or CAUTION. This symbol may be used in conjunction with other symbols or pictographs.



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



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



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

**NOTICE:** Shown without Safety Alert Symbol indicates a situation that may result in property damage.

## GENERAL SAFETY

**KNOW YOUR POWER TOOL.** Read the owner's manual carefully. Learn the tool's applications, work capabilities, and its specific potential hazards.

### BEFORE USING YOUR MACHINE

To avoid serious injury and damage to the tool, read and follow all of the Safety and Operating Instructions before operating the machine.

1. Some dust created by using power tools contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Some examples of these chemicals are:

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

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

2. **READ** the entire Owner's Manual. **LEARN** how to use the tool for its intended applications.

3. **GROUND ALL TOOLS.** If the tool is supplied with a 3 prong plug, it must be plugged into a 3-contact electrical receptacle. The 3rd prong is used to ground the tool and provide protection against accidental electric shock. **DO NOT** remove the 3rd prong. See Grounding Instructions on the following pages.

4. **AVOID A DANGEROUS WORKING ENVIRONMENT.** **DO NOT** use electrical tools in a damp environment or expose them to rain.

5. **DO NOT** use electrical tools in the presence of flammable liquids or gasses.

6. **ALWAYS** keep the work area clean, well lit, and organized. **DO NOT** work in an environment with floor surfaces that are slippery from debris, grease, and wax.

7. **KEEP VISITORS AND CHILDREN AWAY. DO NOT** permit people to be in the immediate work area, especially when the electrical tool is operating.

8. **DO NOT FORCE THE TOOL** to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the tool was intended.

9. **WEAR PROPER CLOTHING. DO NOT** wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. The user must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.

10. **CHILDPROOF THE WORKSHOP AREA** by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.

11. **ALWAYS UNPLUG THE TOOL FROM THE ELECTRICAL RECEPTACLE** when making adjustments, changing parts or performing any maintenance.

# SAFETY INSTRUCTIONS

## 12. KEEP PROTECTIVE GUARDS IN PLACE AND IN WORKING ORDER.

13. **AVOID ACCIDENTAL STARTING.** Make sure that the power switch is in the “OFF” position before plugging in the power cord to the electrical receptacle.

14. **REMOVE ALL MAINTENANCE TOOLS** from the immediate area prior to turning “ON” the machine.

15. **USE ONLY RECOMMENDED ACCESSORIES.** Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the tool. If in doubt, check the instruction manual that comes with that particular accessory.

16. **NEVER LEAVE A RUNNING TOOL UNATTENDED.** Turn the power switch to the “OFF” position. **DO NOT** leave the tool until it has come to a complete stop.

17. **DO NOT STAND ON A TOOL.** Serious injury could result if the tool tips over, or you accidentally contact the tool.

18. **DO NOT** store anything above or near the tool where anyone might try to stand on the tool to reach it.

19. **MAINTAIN YOUR BALANCE. DO NOT** extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.

20. **MAINTAIN TOOLS WITH CARE.** Always keep tools clean and in good working order. Keep all blades and tool bits sharp, dress grinding wheels and change other abrasive accessories when worn.

21. **EACH AND EVERY TIME, CHECK FOR DAMAGED PARTS PRIOR TO USING THE TOOL.** Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions. Check for alignment, binding or breaking of moving parts. A guard or other part that is damaged should be immediately repaired or replaced.

22. **DO NOT OPERATE TOOL WHILE TIRED, OR UNDER THE INFLUENCE OF DRUGS, MEDICATION OR ALCOHOL.**

23. **SECURE ALL WORK.** Use clamps or jigs to secure the work piece. This is safer than attempting to hold the work piece with your hands.

24. **STAY ALERT, WATCH WHAT YOU ARE DOING, AND USE COMMON SENSE WHEN OPERATING A POWER TOOL.**

A moment of inattention while operating power tools may result in serious personal injury.

25. **ALWAYS WEAR A DUST MASK TO PREVENT INHALING DANGEROUS DUST OR AIRBORNE PARTICLES,** including wood dust, crystalline silica dust and asbestos dust. Direct particles away from face and body. Always operate tool in well ventilated area and provide for proper dust removal. Use dust collection system wherever possible. Exposure to the dust may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Allowing dust to get into your mouth or eyes, or lay on your skin may promote absorption of harmful material. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

26. **USE A PROPER EXTENSION CORD IN GOOD CONDITION.** When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. The table on the following page shows the correct size to use depending on cord length and nameplate amperage rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the larger diameter of the extension cord. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.  
**USE ONLY A 3-WIRE EXTENSION CORD THAT HAS A 3-PRONG GROUNDING PLUG AND A 3-POLE RECEPTACLE THAT ACCEPTS THE TOOL’S PLUG.**

27. **ADDITIONAL INFORMATION** regarding the safe and proper operation of this product is available from:

- Power Tool Institute  
1300 Summer Avenue  
Cleveland, OH 44115-2851  
[www.powertoolinstitute.org](http://www.powertoolinstitute.org)
- National Safety Council  
1121 Spring Lake Drive  
Itasca, IL 60143-3201  
[www.nsc.org](http://www.nsc.org)
- American National Standards Institute  
25 West 43rd Street, 4th Floor  
New York, NY 10036  
[www.ansi.org](http://www.ansi.org)
- ANSI O1.1 Safety Requirements for Woodworking Machines and the U.S. Department of Labor regulations  
[www.osha.gov](http://www.osha.gov)

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

# SAFETY INSTRUCTIONS

## ELECTRICAL SAFETY

**⚠ WARNING:** THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

**IN THE EVENT OF A MALFUNCTION OR BREAKDOWN,** grounding provides the path of least resistance for electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and requires a grounding plug (not included). The plug **MUST** be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

**DO NOT MODIFY ANY PLUG.** If it will not fit the electrical receptacle, have the proper electrical receptacle installed by a qualified electrician.

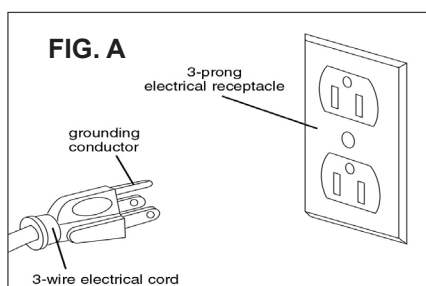
**IMPROPER ELECTRICAL CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. **DO NOT** connect the equipment grounding conductor to a live terminal if repair or replacement of the electric cord or plug is necessary.

**CHECK** with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded when installing or replacing a plug.

**USE ONLY A 3-WIRE EXTENSION CORD THAT HAS THE PROPER TYPE OF A 3-PRONG GROUNDING PLUG THAT MATCHES THE MACHINE'S 3-PRONG PLUG AND ALSO THE 3-POLE RECEPTACLE THAT ACCEPTS THE TOOL'S PLUG. \***

**REPLACE A DAMAGED OR WORN CORD IMMEDIATELY.**

This tool is intended for use on a circuit that has an electrical receptacle as shown in **FIGURE A**. It shows a 3-wire electrical plug and electrical receptacle that has a grounding conductor. If a properly grounded electrical receptacle is not available, an adapter as shown in **FIGURE B** can be used to temporarily connect this plug to a 2-contact ungrounded receptacle. The adapter has a rigid lug extending from it that **MUST** be connected to a permanent earth ground, such as a properly grounded receptacle box. **THIS ADAPTER IS PROHIBITED IN CANADA.**



## EXTENSION CORDS

**⚠ WARNING:** THE USE OF AN EXTENSION CORD WITH THIS MACHINE IS NOT RECOMMENDED. For best power and safety, plug the machine directly into a dedicated, grounded electrical outlet that is within the supplied cord length of the machine.

If an extension cord needs to be used, it should only be for a limited operation of the machine. The extension cord should be as short as possible in length, and have a minimum gauge size of 14AWG.

**⚠ WARNING:** Check extension cords before each use. If damaged replace immediately. Never use a tool with a damaged cord, since touching the damaged area could cause electrical shock, resulting in serious injury.

Use a proper extension cord. Only use cords listed by Underwriters Laboratories (UL). Other extension cords can cause a drop in line voltage, resulting in a loss of power and overheating of tool. When operating a power tool outdoors, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

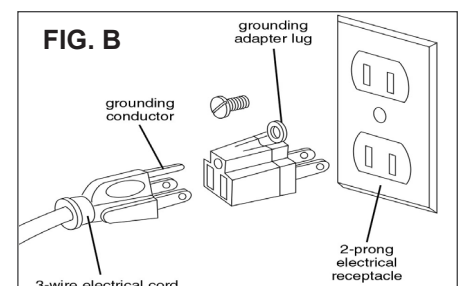
### MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)

120 VOLT OPERATION ONLY				
	25' LONG	50' LONG	100' LONG	150' LONG
0 to 6 Amps	18 AWG	16 AWG	16 AWG	14 AWG
6 to 10 Amps	18 AWG	16 AWG	14 AWG	12 AWG
10 to 12 Amps	16 AWG	16 AWG	14 AWG	12 AWG

**⚠ WARNING:** Keep the extension cord clear of the working area. Position the cord so that it will not get caught on lumber, tools or other obstructions while you are working with your power tool.

\* Canadian electrical codes require extension cords to be certified SJT type or better.

\*\* The use of an adapter in Canada is not acceptable.





# SAFETY INSTRUCTIONS

## SPECIFIC SAFETY INSTRUCTIONS FOR SANDERS

This machine is intended for the surfacing of natural, solid woods. Any other use not as specified, including modification of the machine or use of parts not tested and approved by the equipment manufacturer can cause unforeseen damage.

**ATTENTION:** Use of this sander still presents risks that cannot be eliminated by the manufacturer. Therefore, the user must be aware that wood working machines are dangerous if not used with care and all safety precautions are adhered to.

### Special Safety Rules For Sanders

1. Do not operate this machine until you have read all of the following instructions.
2. Do not attempt to operate this machine until it is completely assembled.
3. Do not turn ON this machine if any pieces are damaged or missing.
4. If you are not familiar with the operation of the machine, obtain assistance from a qualified person.
5. It is highly recommended that this machine be mounted on a level surface or stand.
6. Always wear protective eye wear and hearing protection when operating this machine.
7. Do not operate this machine if you are under the influence of drugs and/or alcohol.
8. Do not wear loose clothing or jewelry when operating this machine. Tie back long hair.
9. Do not wear any gloves while operating this machine.
10. Always make sure the power switch is in the OFF position prior to plugging in the machine.
11. Always make sure the power switch is in the OFF position and the machine is unplugged when doing any cleaning, assembly, setup operation, or when not in use.
12. Always wear a dust mask and use dust collection when working or cleaning the sander.
13. Make sure that all safety guards and hardware are securely tightened before operating the machine.
14. The use of any accessories or attachments not recommended may cause injury to you and damage your machine.
15. This machine must be properly grounded.
16. Replace worn, frayed or torn abrasives, as injury to the user, or the machine, may result.
17. Always keep your face and hands clear of moving parts such as belts, discs and pulleys.
18. Remove material or debris from the work area. Keep work area neat and clean.

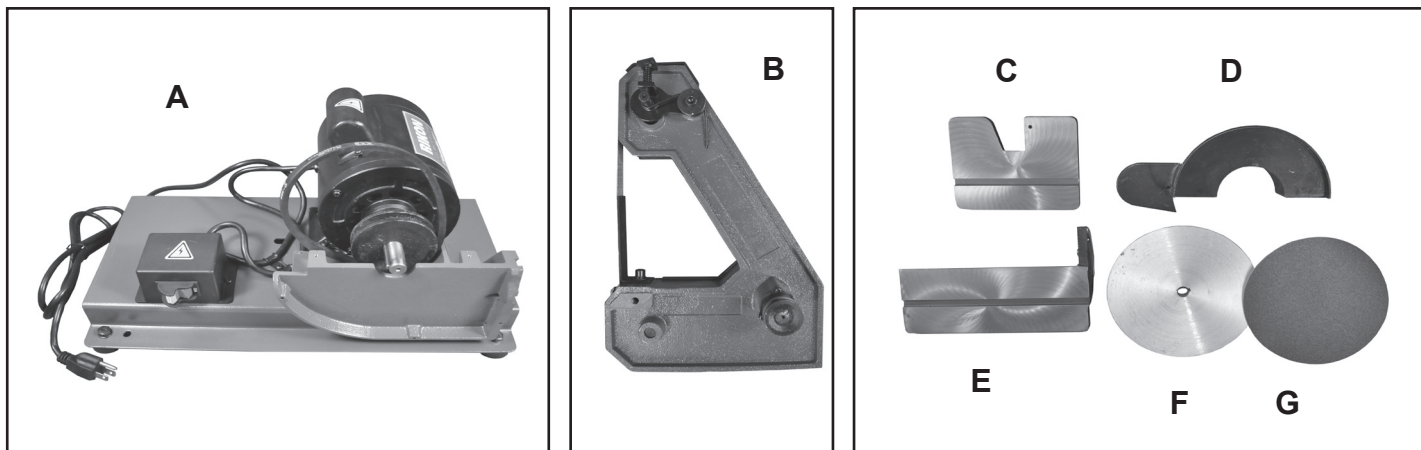
**This owner's manual is not a teaching aid and is intended to show assembly, adjustments, and general use.**

**CALIFORNIA PROPOSITION 65 WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles. For more detailed information about California Proposition 65 log onto [rikontools.com](http://rikontools.com).

# CONTENTS OF PACKAGE

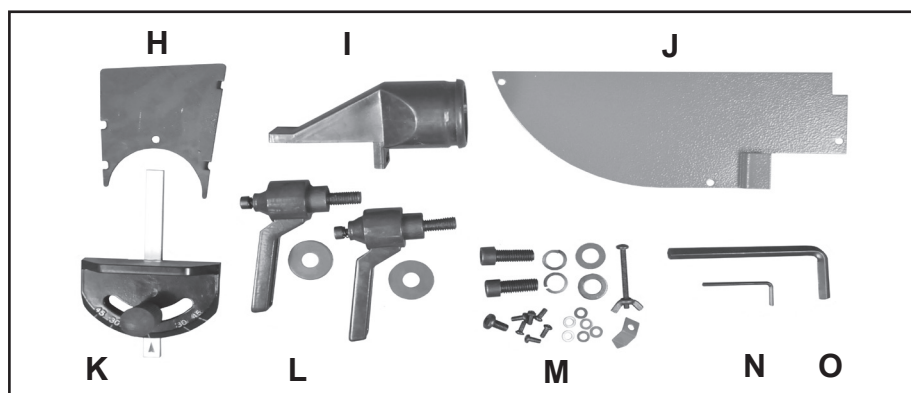
## Unpacking and Checking Contents

Carefully unpack your sander from its carton, and check to make sure the following parts are included. If any parts are missing or broken, please call RIKON Customer Service (877-884-5167) as soon as possible for replacements. DO NOT turn your sander ON if any of these items are missing, as you may cause injury to yourself or damage to your machine.



A. Motor and Base Assembly  
B. Belt Housing Assembly

C. Belt Sanding Table  
D. Motor Belt Cover  
E. Disc Sanding Table  
F. Sanding Disc, 8"  
G. Sandpaper Disc, 8" PSA



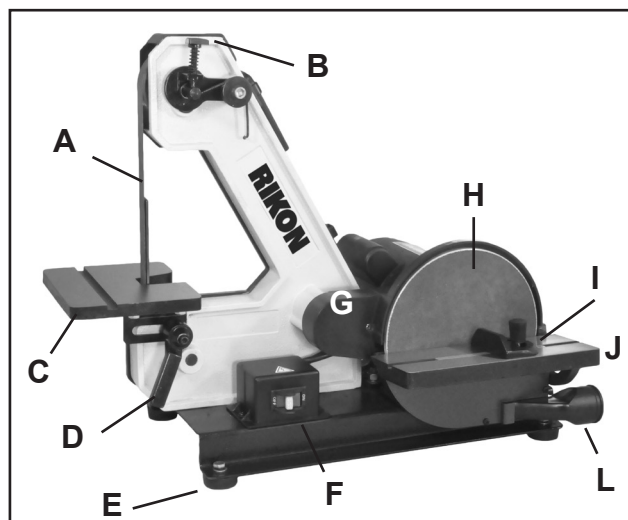
H. V-Belt Rear Cover  
I. Dust Port, 2"  
J. Disc Dust Cover  
K. Miter Gauge  
L. Table Lock Handles

M. Hardware Pack with  
Wrench & Miter Gauge Holders  
N. Hex Wrench 2.5MM  
O. Hex Wrench 8MM  
P. Manual & Warranty Card



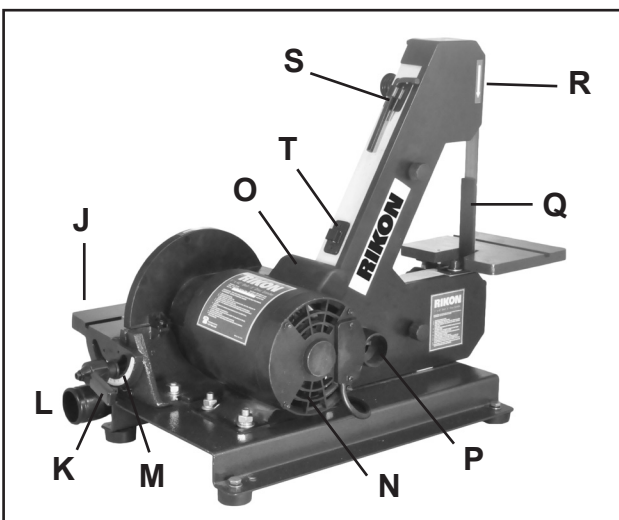
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## GETTING TO KNOW YOUR SANDER



### Item Description

- A. Sanding Belt 1" x 42"
- B. Sanding Belt Tracking Knob
- C. Sanding Belt Table
- D. Sanding Belt Table Lock Handle
- E. Rubber Machine Feet
- F. ON/OFF Safety Switch
- G. Motor V-Belt Safety Cover
- H. Sanding Disc 8" PSA
- I. Miter Gauge
- J. Sanding Disc Table



### Item Description

- K. Sanding Disc Table Lock Handle
- L. Sanding Disc Dust Port
- M. Sanding Disc Table Angle Scale
- N. Motor
- O. Motor Capacitor
- P. Sanding Belt Dust Port
- Q. Sanding Belt Platen
- R. Sanding Belt Safety Cover
- S. Holder for Hex Wrenches
- T. Holder for Miter Gauge

## ASSEMBLY

**THE SANDER MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ASSEMBLY IS COMPLETE.**

### Tools Required for Assembly:

#2 Phillips Screwdriver



### Unpacking and Clean-up

1. Carefully remove all contents from the shipping carton. Compare the contents with the list of contents to make sure that all of the items are accounted for, before discarding any packing material. Place parts on a protected surface for easy identification and assembly. If any parts are missing or broken, please call RIKON Customer Service (877- 884-5167) as soon as possible for replacements. DO NOT turn your machine ON if any of these items are missing. You may cause injury to yourself or damage to the machine.
2. Report any shipping damage to your local distributor.
3. Clean all rust protected surfaces with ordinary house hold type grease or spot remover. Do not use; gasoline, paint thinner, mineral spirits, etc. These may damage painted surfaces.
4. Apply a coat of paste wax to the table to prevent rust. Wipe all parts thoroughly with a clean dry cloth.
5. Set packing material and shipping carton aside. Do not discard until the machine has been set up and is running properly.



## ASSEMBLY

**⚠ WARNING:** Always ensure the sander is unplugged prior to attempting any assembly, installation or changing of parts and accessories.

### ASSEMBLE THE FRAME TO THE BASE

1. Place the Base (Part #5) on a bench and locate the two elongated holes that will be used to secure the sanding Frame (#64) to the base.
2. Remove the plastic Belt Cover (#74) from the frame, by unscrewing the two Knobs (#75). This will allow you to see the two threaded holes in the frame for alignment with the base's holes. FIG. 1.
3. Line up the two holes in the frame with the two holes in the base. From the bottom of the base, insert the two hex head Screws, Washers and Lock Washers (#7, 2, 3) through the holes to join them together. You need to tilt the base up to do this. Hand tighten the two screws. FIG. 2.
4. Do not final tighten at this point.

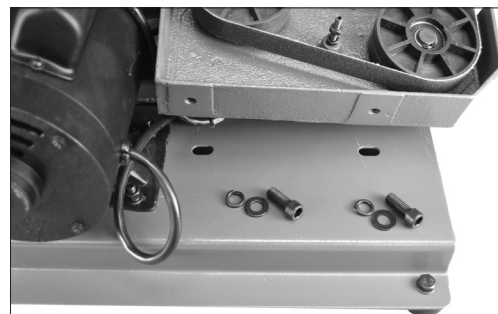


FIG. 1

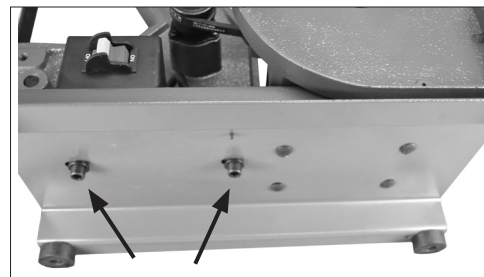


FIG. 2

### INSTALL THE V-BELT

5. The large Belt Pulley (#42) is on the motor arbor and the smaller Pulley (#87) is on the arbor that extends from the frame to drive the sanding belt. Slip the V-Belt (#38) onto the pulleys. FIG. 3.
6. Slide the sanding belt frame assembly to tighten the belt, so there is between 1/4" and 1/2" of deflection, as shown in FIG. 4.
7. Both pulleys should be in-line with each other. If not, move the frame and/or pulleys to align.
8. Final tighten the sanding frame to the base, and re-attach the cover (#74). See step 2 above.

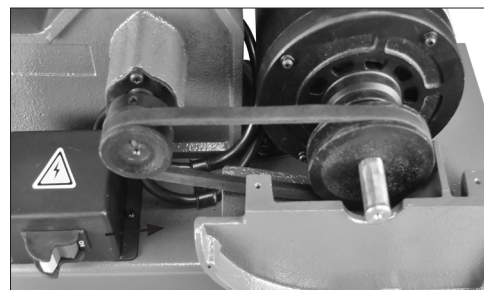


FIG. 3

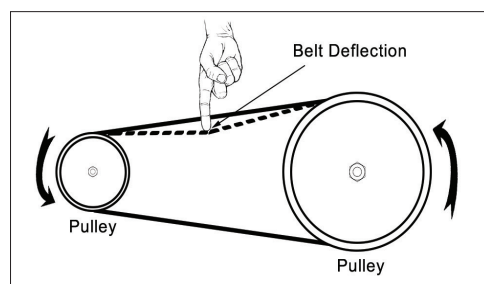


FIG. 4

### INSTALL THE BELT AND PULLEY GUARD

9. Position the belt & disc Drive Belt Guard (#37) over the pulleys as shown in FIG. 5.
10. Line up the two holes in the guard with the holes in the Sanding Disc Casting (#15), and fasten the guard in place with the two M4 pan head Phillips Screws and Washers (#14, 35).
11. Do not final tighten the screws at this time, as you have to adjust the guard to the disc.

**NOTE:** access to the one screw is through a pre-cut hole located near the small pulley end.



FIG. 5

# ASSEMBLY

## INSTALL THE INSIDE BELT GUARD

12. The inside metal Safety Plate (#39) fits between the motor and the Belt Guard (#37).  
13. Position the metal plate inside of the belt guard. The bent tabs will keep it in place, then secure it with the long M4 Phillips head Screw (#36) and hex Nut (#40). FIG. 6.

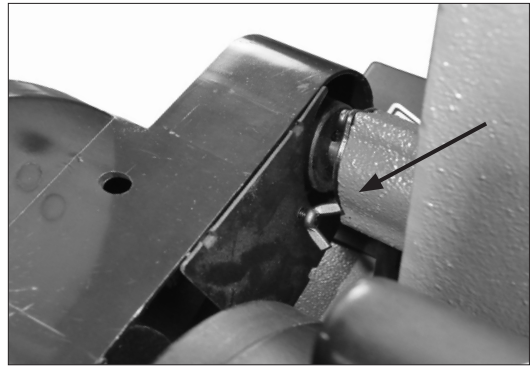


FIG. 6

## INSTALL THE SANDING DISC

14. Make sure the metal Sanding Disc Plate (#33) is clean of foreign material.  
**NOTE:** This disc only takes PSA (pressure sensitive adhesive) sanding abrasives.  
15. Peel the protective backing from the supplied Sandpaper Disc (#32), center it on the metal disc, and press it in place.  
16. Install the sanding disc onto the motor arbor. Line up the disc's keyway to the motor's shaft key and slide the disc in place. Align the disc up with the disc guard so it is slightly proud of the cover. This enables the work piece to pass by it without rubbing.  
17. Tighten the disc onto the motor shaft with the pre-installed hex Set Screw (#34). You can get access to it through the hole in the cover guard. FIG. 7.

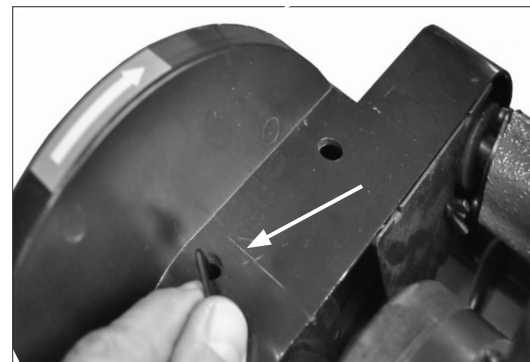


FIG. 7

## INSTALL THE DUST PORT

18. Attach the Dust Port (#19) to the sanding disc base using the M6 Phillips head Screw and Washer (#18, 17). FIG. 8.  
19. The Dust Port has a 1-3/4" internal diameter, and 2" outer diameter for use with a 2" flex hose to your dust collector.

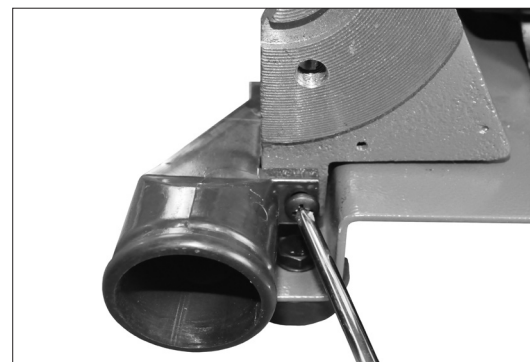


FIG. 8

## INSTALL THE LOWER DISC GUARD

20. Attach the metal, lower Disc Safety Plate (#31) to the sanding disc base with the three M4 Phillips head Screws (#14). FIG. 9.

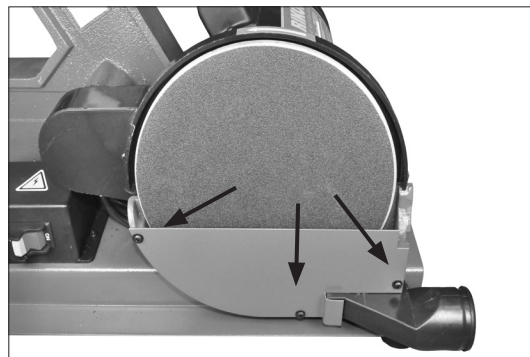


FIG. 9

# ASSEMBLY

## INSTALL THE DISC SANDING TABLE

21. An adjustable Handle and Washer (#25, 26) are supplied to hold the Sanding Disc Table (#22) in position on the sanding base.

22. Line the disc sanding table's slotted right end with the curved keyway in the sanding disc base. Position it in the keyway so that the handle can be installed, fastening the parts together. FIG. 10.

**NOTE:** It is easier to thread the bolt part of the handle on first, then attach the handle to it using the spring loaded Allen head cap screw provided.

23. Attach the Angle Scale Pointer (#16) to the sanding disc frame with the M4 Phillips pan head Screw (#14). The pre-drilled hole is located just below the angle gauge. See FIG. 11.

Adjust the pointer after the table is set to 90°, see page 16. The disc table will tilt from 45° to 90°. FIG. 12.

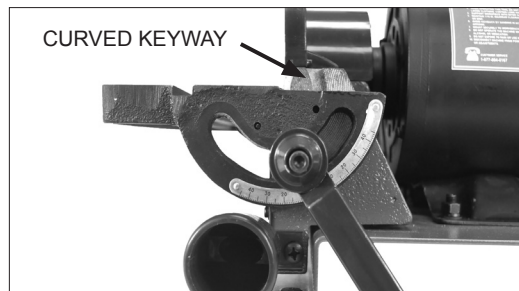


FIG. 10

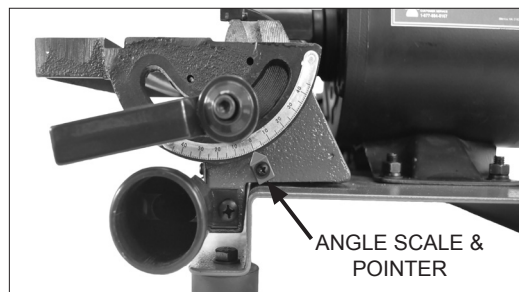


FIG. 11



FIG. 12

## INSTALL THE BELT SANDING TABLE

24. An adjustable Handle and Washer (#25, 26) are supplied to hold the Sanding Belt Table (#79) in position on the Sanding Frame (#64).

25. Position the sanding belt table around the belt, and so that its lower bracket with the curved slot is in position with the threaded hole in the frame.

26. Fasten the table in place. Thread the bolt portion of the locking adjustable handle through the bracket's slot and into the threaded hole of the sanding frame. FIG. 13.

The table will tilt from 45° to 90°. FIG. 14.

**NOTE:** See pages 13 and 14 for additional information on adjusting the sanding tables.

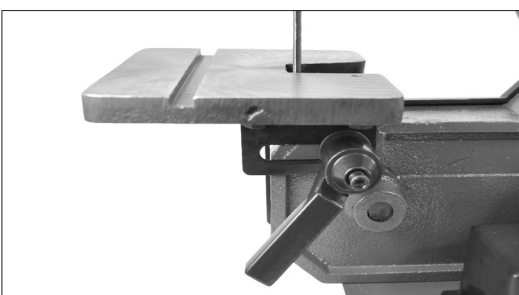


FIG. 13

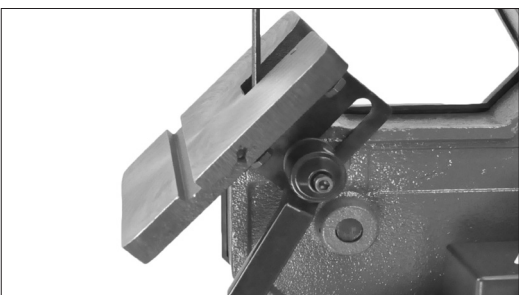


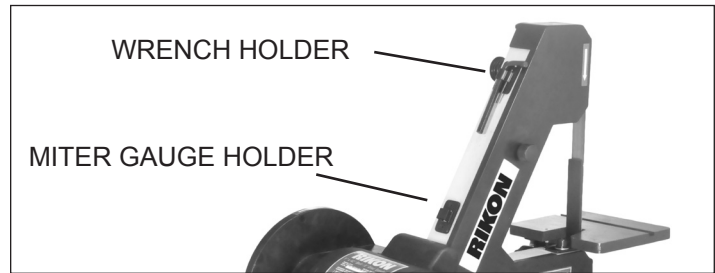
FIG. 14

**⚠ WARNING:** Tables should be adjusted to a distance of about 1/16" away from the sanding disc or belt to prevent accidents if work or your fingers get stuck in the gap while the sander is running.

## ASSEMBLY

### INSTALL THE TOOL HOLDERS

Holders (#88, 90) for convenient storage of the Miter Gauge and Wrenches are supplied. Mount them onto the back of the Belt Frame Casting (#64) with the Phillips Screws supplied (#89).



### MOUNTING THE SANDER TO A WORKBENCH OR STAND

**CAUTION:** If during operation there is any tendency for the sander to tip over, slide or walk on the supporting surface, the sander should be properly mounted to a workbench or stand.

1. Rubber feet are fastened to this sander prior to shipping. They may, or may not, be used when attaching the sander to a bench or stand.
2. Position the sander on the workbench.
3. There are two options for mounting the sander to the workbench:
  - Use the two extra holes in the base (located by the front right foot, and rear left foot when looking at the sanding belt table);
  - Use the four holes that are securing the rubber feet. The bolts will have to be removed and replaced with other fasteners to go through the sander's base and feet. See Figure 15 for illustrations of each method.
4. Mark the workbench through the selected mounting holes located in the sander's base, per above.
5. Drill holes in the workbench at the marks.
6. Using long bolts, washers, lock-washers and nuts; or lag bolts; (fasteners not supplied), secure the sander to the workbench. FIG. 15.

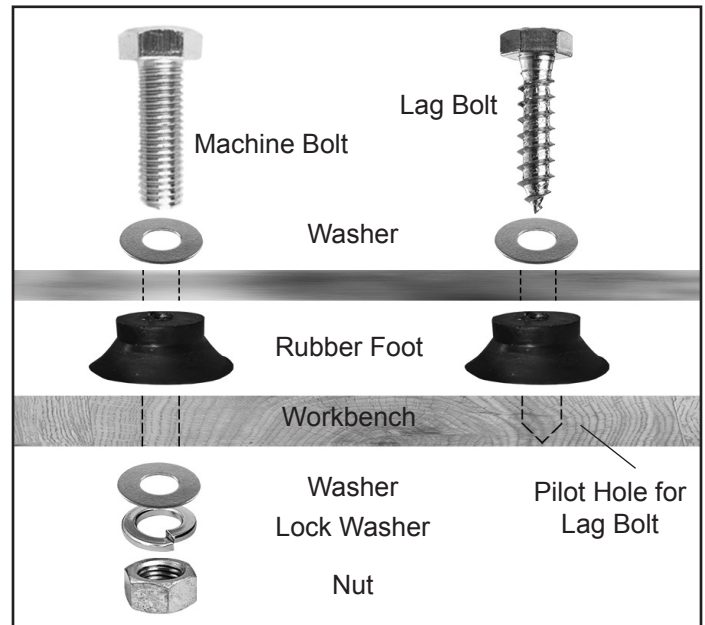


FIG. 15

### TEST RUNNING THE SANDER

With the sander fully assembled and checked to make sure that all parts and fasteners are secure, test run the sander to confirm that it runs smoothly. If any adjustments are needed, these must be done with the machine turned off and unplugged for safety.

If you have any questions regarding assembly before operating the sander, contact RIKON Tech Support at 877-884-5167 for assistance.

### California Proposition 65 Warning

**WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

For more detailed information about California Proposition 65 log onto [rikontools.com](http://rikontools.com).



## OPERATION

**⚠ WARNING:** When sanding, always position your work on the downward, rotating side (left side) of the sanding disc. FIG. 16. The sanding action will then force the wood down, safely towards the table, where it can be controlled. Sanding on the right, upward rotating side of the disc is dangerous, as your work cannot be controlled and 'kick-back' may occur - the wood being forced up and out of your hands.

**⚠ WARNING:** Always ensure the sander is unplugged prior to attempting any assembly, installation or changing of parts and accessories.

### DISC SANDING

1. Depending on what type of sanding that you will be doing, set the Sanding Disc Table to the proper angle from 45° to 90°.
2. Once the table has been set for the correct sanding angle, and all fasteners are secure, the machine can be plugged in for operation.
3. Use the Miter Gauge for added control of the work piece during sanding. The miter gauge can also be set to various degree angles for maintaining accurate angles when sanding small or multiple parts.
4. Do not force the work piece into the sanding disc. Sand using light pressure, letting the sanding abrasives time to do their work!
5. Move your work piece slightly left and right on the disc, keeping to the left-of-center, downward side. This will help prevent resin or debris from building up on one area of the disc, and also helps to prevent burning of the sanded surface from excessive abrasive-action heat build-up.

**NOTE:** It is strongly recommended that users employ a dust-collection system when using this belt & disc sander. Use of a dust mask or respirator is still recommended, even when a dust collection system is in use.



FIG. 16



FIG. 17



FIG. 18



## OPERATION

**⚠ WARNING:** Always ensure the sander is unplugged prior to attempting any assembly, installation or changing of parts and accessories.

### BELT SANDING

1. Depending on what type of sanding that you will be doing, set the Sanding Belt Table to the proper angle from 45° to 90° with a protractor, or other angle measuring tool or pre-cut sample.
2. Once the table has been set for the correct sanding angle, and all fasteners are secure, the machine can be plugged in for operation.
3. Use the Miter Gauge for added control of the work piece during sanding. The miter gauge can also be set to various degree angles for maintaining accurate angles when sanding small or multiple parts.
4. Do not force the work piece into the sanding belt. Sand using light pressure, letting the sanding abrasives time to do their work!
5. Move your work piece slightly left and right on the belt. This will help prevent resin or debris from building up on one area of the belt, and also helps to prevent burning of the sanded surface from excessive abrasive-action heat build-up.
6. The Platen (#67) supports the back of the sanding belt and offers a flat surface to sand or sharpen against. It should be positioned so it is almost touching the back of the sanding belt.
7. To adjust the platen, loosen the hex Screw (#7) at the rear of the platen. FIG. 20.
8. The platen can also be removed for contour sanding or polishing.



FIG. 19



FIG. 20

### SANDING BELT TRACKING

1. Belt tracking on the center of the drive wheels is pre-set at the factory. If an adjustment need to be made, the sander must be turned on.
2. Slowly turn the Belt Tracking Knob (#61) to correct the tracking of the belt - left or right as needed - so that the belt finally rides on the center of the top drive wheel (#72). FIG. 21.

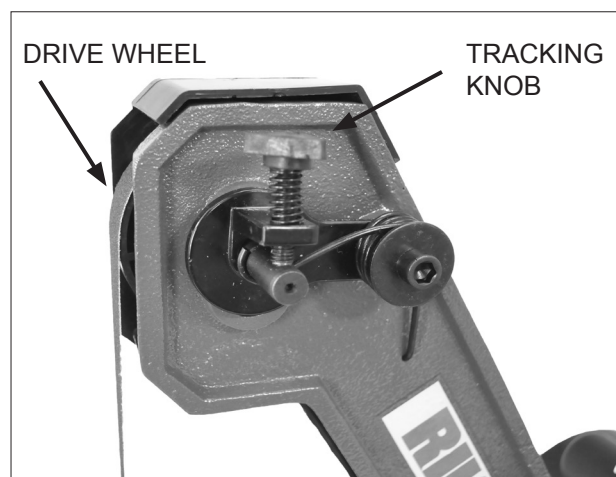


FIG. 21

## OPERATION

**⚠ WARNING:** Always ensure the sander is unplugged prior to attempting any assembly, installation or changing of parts and accessories.

### CHANGING THE SANDING BELT

1. Remove the plastic Cover (#74) from the frame by unscrewing the two knobs (#75).
2. Tilt the sanding belt table forward to 45° so that there is ample space between the platen and rear of the table to remove the belt.
3. Press down on the tracking knob (FIG. 21) to compress the spring tension, and then be able to slide the sanding belt off the three pulleys.
4. Install a new sanding belt by compressing the tracking knob and sliding the new belt onto the three drive wheels.

**NOTE:** Follow the directional arrows that are printed on the back of the sanding belt. The belt is to rotate down towards the sanding table. See FIG. 22.

5. Re-attach the safety cover onto the frame with the two knobs.
6. Check the belt tracking to ensure that the belt is riding on the center of the drive wheels. See page 14 for the belt tracking procedures.



**FIG. 22**

See page 21 for information on replacement sanding belts and discs.

### CHANGING THE SANDING DISC

1. Remove and set aside the miter gauge.
2. Remove the sanding disc table.
3. Peel the used abrasive disc from the metal sanding disc plate. FIG. 23.
4. Make sure that the disc plate is clean of any residue.
5. Peel the protective backing from the new PSA 8" abrasive sanding disc.
6. Center and press the new 8" PSA sanding disc firmly onto the disc plate.
7. Replace the sanding table and handle that were removed in step 2.



**FIG. 23**

**NOTE:** Hook & Loop sanding discs cannot be used with this sander! Only 8" sanding discs with pressure sensitive adhesive (PSA) backing can be used.

# ADJUSTMENTS

## DISC TABLE ADJUSTMENTS

Ensure sander is disconnected from the power supply prior to commencing work.

1. To check the trueness of the 90° angle of the disc sanding table, place a square or other measuring device on the table with the other end against the sanding disc. FIG. 24.
2. Loosen the disc table adjustment Handle (#25), and adjust table angle to 90°.
3. Re-tighten the disc table adjustment handle.
4. Adjust the Angle Scale Pointer (#16) to 0°.
5. To adjust the disc table to another angle, loosen the disc table adjustment handle.
6. Set the table at the desired angle using the angle scale pointer.
7. Re-tighten the disc table adjustment handle.

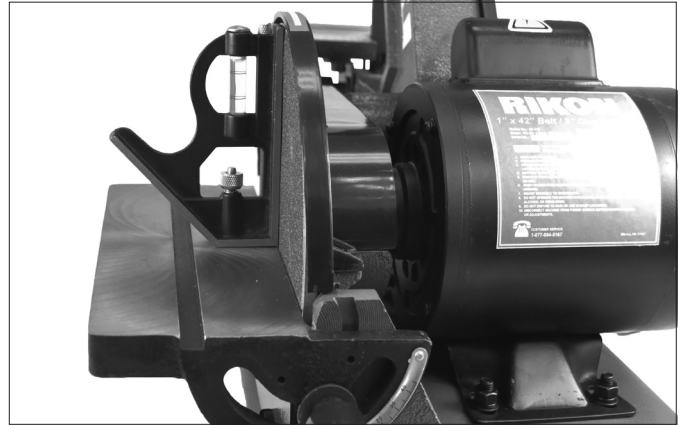


FIG. 24

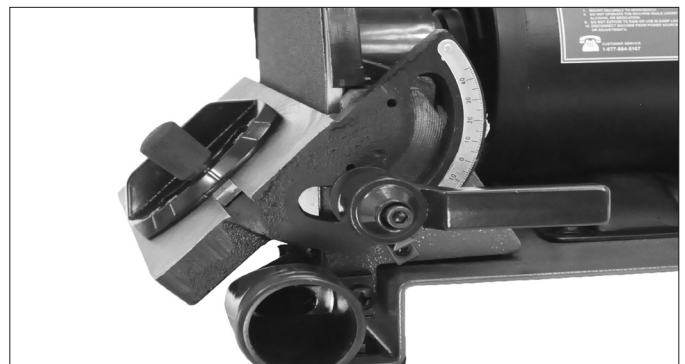


FIG. 25

## BELT TABLE ADJUSTMENTS

Ensure sander is disconnected from the power supply prior to commencing work.

For most sanding operations, the table will likely remain at a 90° angle to the belt. A positive stop is provided with your sander to ensure fast positioning of the table at 90 degrees to the belt.

1. Loosen the table-locking Handle (#25).
2. Position the table back to the platen so there is about 1/16" space between it and the belt.
3. Using a square, protractor or other 90° tool, measure the angle of the table against the Platen (#67). FIG. 26. Once the 90° is setting is found, lock it in place, then adjust the hex Set Screw Stop (#80), that extends under the table.
4. To set the table to a different angle, loosen the handle and tilt the table forward until it is at the required angle. FIG. 27.
5. Tighten the handle to lock the table in position for sanding.

**NOTE:** To get the full range of table angling, handle must be very loose, so that it slides along the slot in the table bracket. The table can then be moved back to get maximum angles.

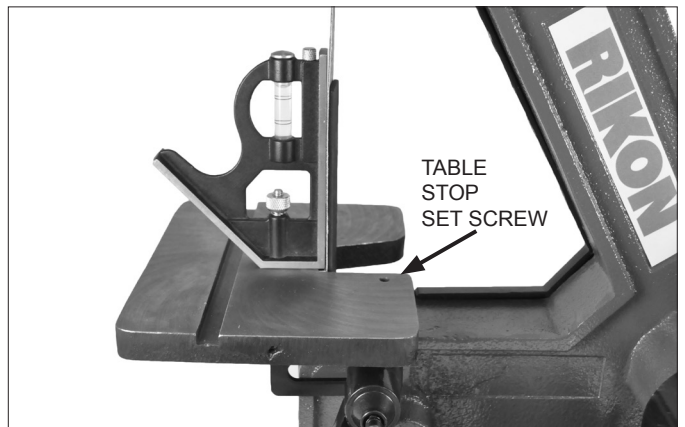


FIG. 26

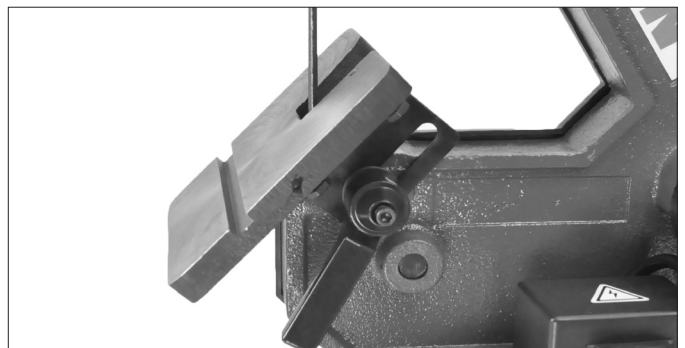


FIG. 27



# ADJUSTMENTS

## V-BELT TENSION ADJUSTMENTS

Ensure sander is disconnected from the power supply prior to commencing work.

Should the rotation of the sanding belt or disc slow down or stall, the cause may be that the V-belt is slipping on the two pulleys. This may be because the motor or frame have become loose from the base, or that the V-belt has stretched out due to the machine being used. In either case, re-adjustment of the V-belt is needed.

1. To gain access to the V-belt, remove the V-belt rear metal Safety Plate (#39) and V-Belt & Disc Guard (#37).

NOTE: For clarity, FIG. 28 shows the V-belt and pulleys with the metal sanding disc plate, table assembly and lower disc guard removed.

2. Tilt the sander back, and slightly loosen the two hex head Screws (#7) so that the sanding Frame (#64) can be moved a bit forward or backwards to tension the V-belt. FIG. 29.

3. Position the frame so the tension on the V-belt is about 1/4" to 1/2" deflection when moderate pressure is applied to the belt. FIG. 30.

4. Tighten the hex head screws to secure the frame in its new position on the base.

5. Re-install the safety guards over the V-belt, in step 1 above. If needed, see pages 9 & 10 for the installation process.

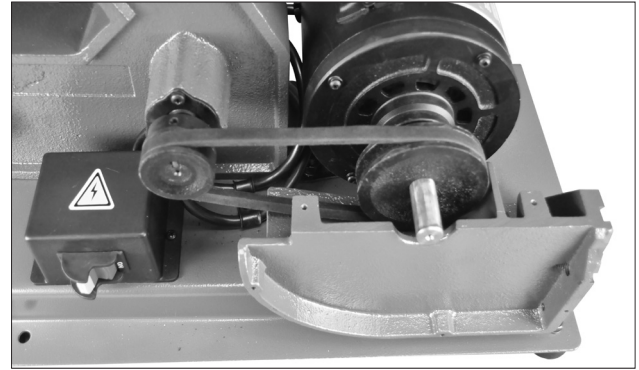


FIG. 28

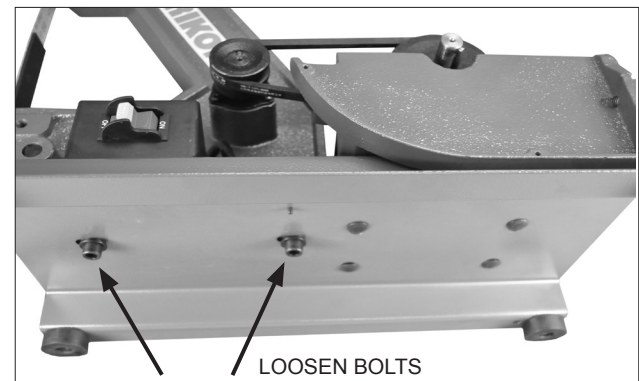


FIG. 29

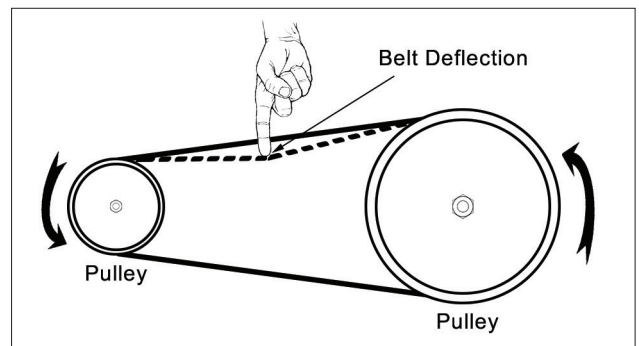


FIG. 30

## MITER GAUGE ADJUSTMENTS

A Miter Gauge is supplied with your sander, and can be used on the disc or belt tables, which have slots in their design to fit the miter gauge's bar. The miter gauge head can be set anywhere up to 45° (right or left) by loosening the Lock Knob (#30), setting the miter gauge head to the desired angle, and then retightening the lock knob. FIG. 31.

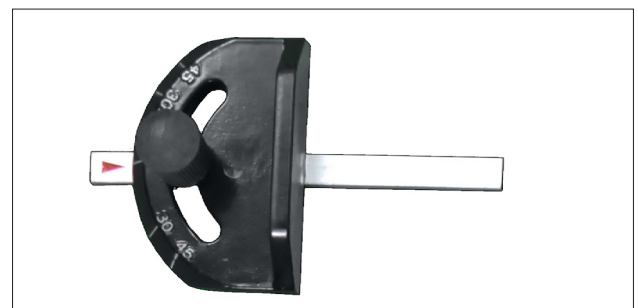


FIG. 31

## MAINTENANCE

**⚠ WARNING:** Turn the power switch “OFF” and disconnect the plug from the outlet prior to adjusting or maintaining the sander. DO NOT attempt to repair or maintain the electrical components of the motor. Take the sander to a qualified service technician for this type of maintenance.

### MAINTENANCE REQUIRED

1. Check the power cord for any damage.
2. Check sanding belts and discs for damage or wear.
3. Check all guards and hardware to make sure they are secure.
4. Check all moving parts for alignment and binding issues.
4. Dress/Clean sanding surfaces for best abrasive action.
5. Replace sanding belts or discs when worn or damaged.
6. Clean and vacuum dust from the motor housing and other sander parts.
7. Keep iron tables free of rust. Apply coat of paste wax or silicon spray.

### FREQUENCY

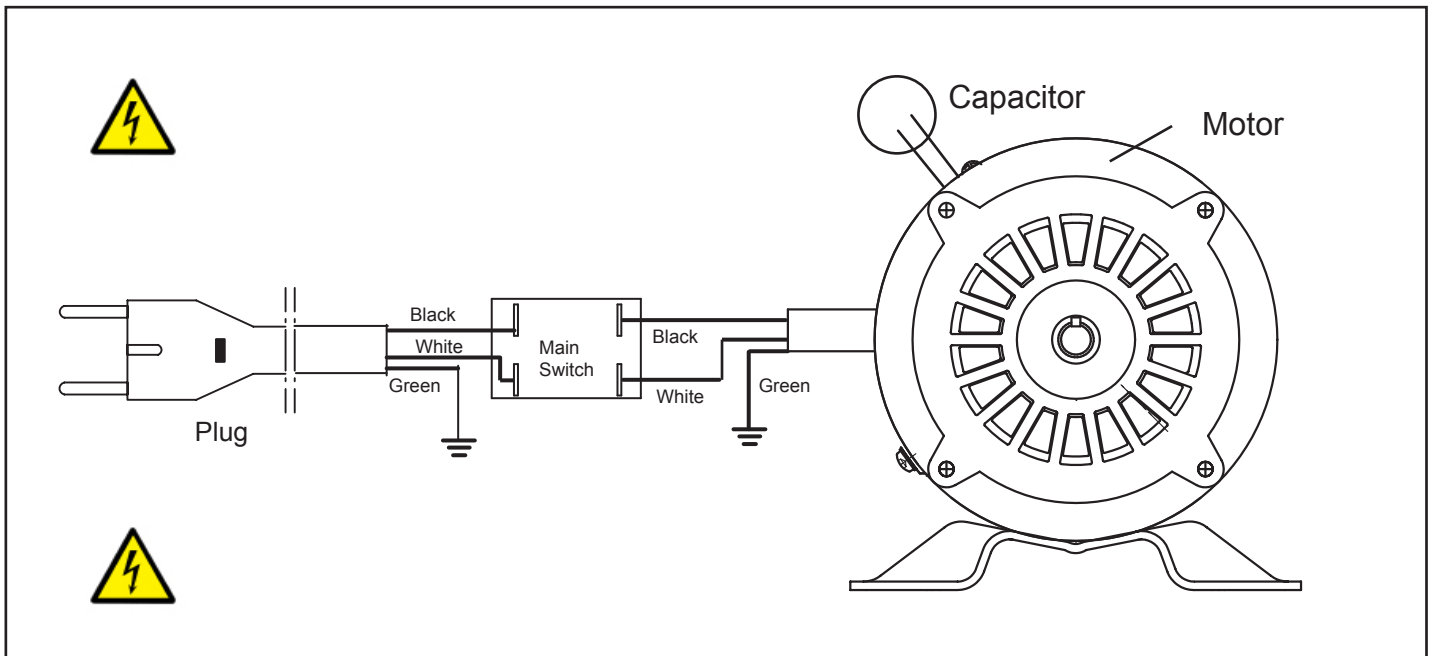
Before each use.  
Before each use.  
Before each use.  
Before each use.  
As needed  
As needed.  
As needed.  
As needed.

**NOTE:** Lubrication of the bearings is not necessary, as they are sealed and pre-lubricated for life. Just replace a bearing if failure occurs. Do not use compressed air near bearings. Simply wipe the exposed bearing surfaces with a dry cloth to clean them.

**Service beyond recommended maintenance on these tools should only be performed by an authorized, qualified technician.**

## WIRING DIAGRAM

**⚠ WARNING:** This machine must be grounded. Replacement of the power supply cable should only be done by a qualified electrician.





## TROUBLESHOOTING

Service on these tools should only be performed by an authorized, qualified technician.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Motor will not start.	<ol style="list-style-type: none"> <li>1. Low voltage</li> <li>2. Open circuit in motor or loose connections.</li> <li>3. Blown fuse or breaker.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check power source for proper voltage.</li> <li>2. Inspect all lead connections on motor for loose or open connections. (Send for Servicing.)</li> <li>3. Short circuit. (Send for Servicing.)</li> <li>4. Improper match between tool and circuit, fuse or breaker.</li> </ol>
Motor will not start – fuses or circuit breakers tripping or blowing.	<ol style="list-style-type: none"> <li>1. Short circuit in line, cord or plug.</li> <li>2. Short circuit in motor or loose connections.</li> <li>3. Incorrect fuses or circuit breakers in power line.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect cord or plug for damaged insulation and shorted wires.</li> <li>2. Inspect all connections on motor for loose or shorted terminals and/or worn insulation.</li> <li>3. Install correct fuses or circuit breakers or switch tool to an appropriately sized circuit.</li> </ol>
Motor overheats.	<ol style="list-style-type: none"> <li>1. Motor is overloaded.</li> <li>2. Extension cord is too long and of insufficient gauge (weight).</li> <li>3. Poor air circulation around the motor</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce load on motor (pressure on the sandpaper from the object being sanded.)</li> <li>2. Utilize an extension cord of appropriate gauge and length or plug tool directly into outlet.</li> <li>3. Reduce the motor run time.</li> </ol>
Motor stalls or runs slow - resulting in blown fuses or tripped circuit.	<ol style="list-style-type: none"> <li>1. Motor is overloaded.</li> <li>2. Short circuit in the motor or loose connections.</li> <li>3. Low line voltage.</li> <li>4. Incorrect fuses or circuit breakers in the power line.</li> <li>5. Motor capacitor has failed.</li> <li>6. Belt tension is too tight.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the load on the motor.</li> <li>2. Inspect connections on motor for loose or shorted terminals or worn insulation.</li> <li>3. Correct low voltage conditions (for example: improper extension cord length and/or wire gauge).</li> <li>4. Install <b>CORRECT</b> fuses or circuit breakers or plug tool into an appropriate circuit, matched to an appropriate fuse or breaker.</li> <li>5. Replace motor capacitor.</li> <li>6. Decrease belt tension.</li> </ol>
Machine slows down when operating.	<ol style="list-style-type: none"> <li>1. Feed rate is too great.</li> <li>2. Undersized circuit or use of undersized extension cord.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the rate at which the work is fed into the sandpaper.</li> <li>2. Ensure circuit wires or extension cords are proper gauge, or eliminate use of extension cords.</li> </ol>
Machine vibrates excessively or makes excess noise.	<ol style="list-style-type: none"> <li>1. Incorrect motor mounting.</li> <li>2. Incorrect sanding-belt tension.</li> <li>3. Weak or broken belt tension spring.</li> <li>4. Idler roller is too loose.</li> <li>5. Broken/defective sanding belt or disc.</li> <li>6. Drive belt is too tight</li> </ol>	<ol style="list-style-type: none"> <li>1. Make sure all fasteners are tightened.</li> <li>2. Adjust tension-adjustment knob. Follow belt tensioning/tracking instructions in this manual.</li> <li>3. Replace belt tension spring by service technician.</li> <li>4. Have service technician adjust idler roller.</li> <li>5. Replace sanding belt/disc.</li> <li>6. Decrease belt tension.</li> </ol>

## TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Burn marks on work piece.	<ol style="list-style-type: none"> <li>Using a sanding grit that is too fine.</li> <li>Using too much pressure.</li> <li>Work held still for too long against the sandpaper.</li> </ol>	<ol style="list-style-type: none"> <li>Use a coarser-grit sandpaper.</li> <li>Reduce work piece pressure on the sandpaper while sanding.</li> <li>Do not keep the work piece sanding in one place for too long.</li> </ol>
Deep sanding grooves or scars in work piece.	<ol style="list-style-type: none"> <li>Sanding belt/disc grit is too coarse for the desired finish.</li> <li>Work piece is being sanded across the grain.</li> <li>Too much sanding force on the work piece.</li> <li>Work piece held still against the belt-disc for too long.</li> </ol>	<ol style="list-style-type: none"> <li>Use a finer-grit sanding belt or disc.</li> <li>Sand with the grain of the wood.</li> <li>Reduce pressure on work piece while sanding.</li> <li>Keep work piece moving while sanding.</li> </ol>
Sanding surface clogs quickly.	<ol style="list-style-type: none"> <li>Too much pressure against the belt or disc.</li> <li>Sanding softwood or highly resinous woods.</li> </ol>	<ol style="list-style-type: none"> <li>Reduce pressure on work piece while sanding.</li> <li>Use different stock, sandpaper grits, or accept that this will happen and plan on cleaning or replacing belts &amp; discs frequently.</li> </ol>
Sanding grains easily rub off the belt or disc.	<ol style="list-style-type: none"> <li>Sandpaper has been stored in an incorrect environment.</li> <li>Sandpaper has been damaged or folded.</li> </ol>	<ol style="list-style-type: none"> <li>Ensure sandpaper is stored away from extremely hot &amp; dry or damp/humid conditions.</li> <li>Store sanding accessories flat – not bent or folded.</li> </ol>
Work piece lifts up from the sanding disc-table.	<ol style="list-style-type: none"> <li>Sanding on the “up” , right side of the disc, where rotation is up and away from the table.</li> </ol>	<ol style="list-style-type: none"> <li>Sand on left side of sanding disc, where the disc rotates down towards the table.</li> </ol>

For parts or technical questions contact: [techsupport@rikontools.com](mailto:techsupport@rikontools.com) or 877-884-5167.

## NOTES

[illegible]

## ACCESSORIES

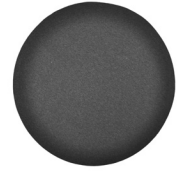
### SANDING BELTS



1" x 42" Aluminum Oxide

<b>50-3080</b>	80 Grit *	Pack of 5
<b>50-3120</b>	120 Grit *	Pack of 5
<b>50-3150</b>	150 Grit *	Pack of 5
<b>50-3180</b>	180 Grit *	Pack of 5
<b>50-3220</b>	220 Grit *	Pack of 5
<b>50-3320</b>	320 Grit	Pack of 5
<b>50-3999</b>	Assortment	Pack of 10
* 2 each 5 grits 80-220		

### SANDING DISCS



8" Diameter, PSA  
Aluminum Oxide

<b>50-8060</b>	60 Grit	Pack of 5
<b>50-8080</b>	80 Grit	Pack of 5
<b>50-8120</b>	120 Grit	Pack of 5
<b>50-8180</b>	180 Grit	Pack of 5
<b>50-8220</b>	220 Grit	Pack of 5
<b>50-8999</b>	Assortment	Pack of 10
2 each 5 grits		

## WARRANTY

**RIKON**  
**POWER TOOLS**

### 5-Year Limited Warranty

RIKON Power Tools Inc. ("Seller") warrants to only the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship for a period of five (5) years from the date the product was purchased at retail. This warranty may not be transferred.

This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs, alterations, lack of maintenance or normal wear and tear. Under no circumstances will Seller be liable for incidental or consequential damages resulting from defective products. All other warranties, expressed or implied, whether of merchantability, fitness for purpose, or otherwise are expressly disclaimed by Seller. This warranty does not cover products used for commercial, industrial or educational purposes.

This limited warranty does not apply to accessory items such as blades, drill bits, sanding discs, grinding wheels or belts and other related items.

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

To take advantage of this warranty proof of purchase documentation, which includes date of purchase and an explanation of the complaint, must be provided.

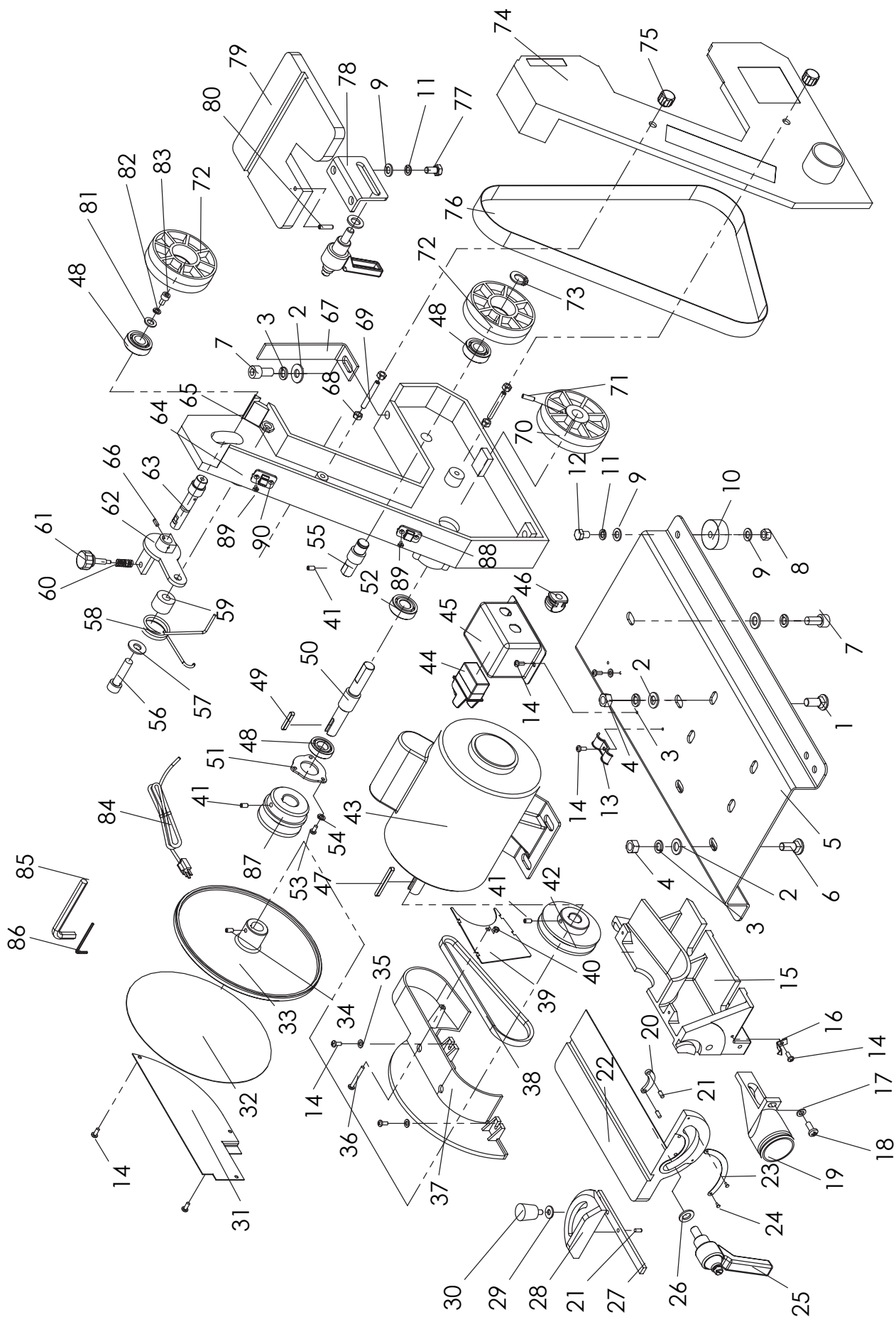
The Seller reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

To take advantage of this warranty, please fill out the enclosed warranty card and send it to:  
RIKON Warranty, 16 Progress Rd., Billerica, MA 01821

The card must be entirely completed in order for it to be valid. If you have any questions please contact us at 877-884-5167 or [warranty@rikontools.com](mailto:warranty@rikontools.com).

# PARTS DIAGRAM

**NOTE:** Please reference the Manufacturer's Part Number when calling for Replacement Parts.  
For Parts under Warranty, the Serial Number of your machine is required.



# PARTS LIST

KEY NO.	DESCRIPTION	RIKON PART NO.	KEY NO.	DESCRIPTION	RIKON PART NO.
1	Carriage Bolt M10x20	P50-144-1	46	Wire Retainer Ring	P50-144-46
2	Flat Washer D10	P50-144-2	47	Flat Key 5x50	P50-144-47
3	Spring Washer D10	P50-144-3	48	Ball Bearing 6202 2RS	P50-144-48
4	Hex Nut M10	P50-144-4	49	Flat Key 5x25	P50-144-49
5	Base	P50-144-5	50	Drive Shaft	P50-144-50
6	Carriage Bolt M10x25	P50-144-6	51	Flange Plate	P50-144-51
7	Hex Socket Cap Screw M10x20	P50-144-7	52	Ball Bearing 6002 2RS	P50-144-52
8	Hex Nut M8	P50-144-8	53	Phillips Screw M4x12	P50-144-53
9	Flat Washer D8	P50-144-9	54	Spring Washer D4	P50-144-54
10	Rubber Foot	P50-144-10	55	Short Guide Wheel Shaft	P50-144-55
11	Spring Washer D8	P50-144-11	56	Hex Socket Cap Screw M10x40	P50-144-56
12	Hexagon Bolt M8x20	P50-144-12	57	Flat Washer D10	P50-144-57
13	Cord Clip	P50-144-13	58	Rotation Spring	P50-144-58
14	Phillips Screw M4x10	P50-144-14	59	Spacer Bushing	P50-144-59
15	Sanding Disc Casting	P50-144-15	60	Compressed Spring	P50-144-60
16	Indicator Arrow	P50-144-16	61	Belt Adjusting Knob	P50-144-61
17	Flat Washer D6	P50-144-17	62	Guide Roller Support	P50-144-62
18	Phillips Screw M6x15	P50-144-18	63	Guide Wheel Shaft	P50-144-63
19	Dust Collector Fitting	P50-144-19	64	Belt Frame Casting	P50-144-64
20	Guide Block	P50-144-20	65	Special Nut M10	P50-144-65
21	Cylindrical Pin	P50-144-21	66	Roll Pin 3x20	P50-144-66
22	Sanding Disc Table	P50-144-22	67	Belt Backstop Platen	P50-144-67
23	Angle Scale Plate	P50-144-23	68	Hex Nut M6	P50-144-68
24	Rivet 2x5	P50-144-24	69	Hexagon Set Screw M6x45	P50-144-69
25	Adjustable Lever Handle	P50-144-25	70	Driving Wheel	P50-144-70
26	Big Flat Washer D10	P50-144-26	71	Hexagon Set Screw M5x16	P50-144-71
27	Miter Gauge Bar	P50-144-27	72	Guide Roller Wheel	P50-144-72
28	Miter Gauge Dial	P50-144-28	73	C-Clip Washer D15	P50-144-73
29	Plastic Washer D6	P50-144-29	74	Sanding Belt Cover	P50-144-74
30	Small Rotary Lock Knob	P50-144-30	75	Rotary Knob	P50-144-75
31	Sanding Disc Lower Safety Plate	P50-144-31	76	Sanding Belt 1" x 42"	P50-144-76
32	Sandpaper 8" PSA	P50-144-32	77	Hex Bolt M8x15	P50-144-77
33	Sand Disc Plate	P50-144-33	78	Table Support Bracket	P50-144-78
34	Hexagon Set Screw M5x5	P50-144-34	79	Sanding Belt Table	P50-144-79
35	Flat Washer D4	P50-144-35	80	Hexagon Set Screw M5x20	P50-144-80
36	Phillips Screw M4x45	P50-144-36	81	Flat Washer	P50-144-81
37	Drive Belt Cover	P50-144-37	82	Spring Washer D6	P50-144-82
38	V-Belt	P50-144-38	83	Hex Socket Cap Screw M6x10	P50-144-83
39	Rear Safety Plate	P50-144-39	84	Power Cord	P50-144-84
40	Hex Nut with Flange M4	P50-144-40	85	Hex Wrench 8mm	P50-144-85
41	Hexagon Set Screw M5x6	P50-144-41	86	Hex Wrench 2.5mm	P50-144-86
42	Belt Pulley	P50-144-42	87	Drive Pulley	P50-144-87
43	Motor	P50-144-43	88	Holder for Miter Gauge	P50-144-88
44	Switch w/Safety Tab HY7	P50-144-44	89	Phillips Screw M4x7	P50-144-89
45	Switch Cover	P50-144-45	90	Holder for Wrench	P50-144-90





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