

## Oscillating Belt / Spindle Sander



## Operator's Manual

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

The serial number can be found on the specification label on the rear of your machine.

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

For technical support, email [techsupport@rikontools.com](mailto:techsupport@rikontools.com) - For parts questions, email [parts@rikontools.com](mailto:parts@rikontools.com)

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## SPECIFICATIONS - 50-310

|                                  |  |
|----------------------------------|--|
| Motor                            | 1/2 HP, 4 A, 120V, 60Hz, 10,000 RPM          |
| Spindle Speed (no load)          | 2,000 RPM                                    |
| Table Size (LxW)                 | 16" x 15-3/4" (405mm x 400mm)                |
| Spindle Length x Diameter        | 4-1/2" (115mm) x 1/2" (12.7mm)               |
| Spindle Diameters Included (5)   | 1/2", 3/4", 1", 1-1/2", 2"                   |
| Maximum Spindle Diameter Allowed | 2"   |
| Belt Size                        | 4" x 24"                                     |
| Belt Speed                       | 1565 FPM                                     |
| Spindle/Belt Oscillation         | 5/8" (16mm)                                  |
| Oscillations Per Minute          | 58   |
| Dust Outlet                      | 38mm (1-5/16" I.D. or 1 1/2" O.D.)           |
| Height (overall)                 | 18-1/4" (464mm)                              |
| Height (base to table)           | 13-1/8" (333mm)                              |
| Table Width                      | 16" (405mm)                                  |
| Table Depth                      | 15-3/4" (400mm)                              |
| Table Tilt                       | 0-45 degrees                                 |
| Base Size (LxW)                  | 17-7/8" x 16-3/4" (455mm x 415mm)            |
| Net Weight                       | 27.8 Lbs. (12.6 kgs.)                        |
| Shipping Weight                  | 32 lbs. (14.5 kgs.)                          |
| Shipping Carton (LxWxH)          | 20.67" x 18.11" x 19.49" (525 x 460 x 495mm) |

**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. **WARNING:** 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 gases.

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 01.1 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.

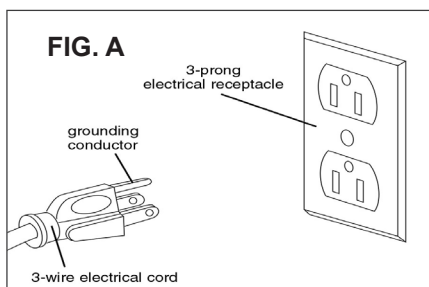
**IMPROPER ELECTRICAL CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. **DO NOT** connect the equipment grounding conductor to a live terminal if repair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

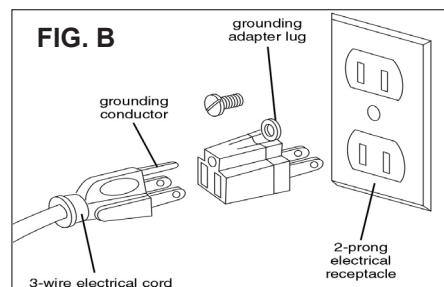
### MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)

| 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 and composite materials. 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, and invalidate the warranty.

**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.

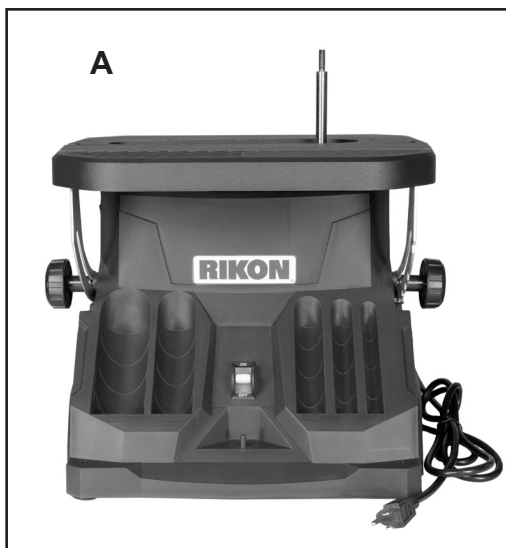
1. Do not operate this machine until you have read all of the following instructions.
2. Do not attempt to operate this machine until it is completely assembled.
3. Do not turn ON this machine if any pieces are missing.
4. This machine must be properly grounded.
5. If you are not familiar with the operation of the machine, obtain assistance from a qualified person.
6. It is highly recommended that this machine be mounted to a flat and secure work surface or stand.
7. Always wear protective eye wear and hearing protection when operating this machine.
8. Always wear a dust mask and use adequate dust collection and proper ventilation. Use of sanders can produce harmful particles while sanding certain types of woods, composites or plastics.
9. Do not operate this machine if you are under the influence of drugs, alcohol or medication.
10. Do not wear loose clothing or jewelry when operating this machine. Tie back long hair.
11. Do not wear any gloves while operating this machine.
12. Always make sure the power switch is in the OFF position prior to plugging in the machine.
13. Always make sure the power switch is in the OFF position and the machine is unplugged when doing any cleaning, assembly, setup operations, or when not in use.
14. The use of any accessories or attachments not recommended may cause injury to you and damage your machine.
15. Check the work piece for nails, screws or other materials that could tear or damage the sanding drums.
16. Sanding of metals is not recommended as sparks may ignite sawdust and wood shavings.
17. Sanding of fiberglass or similar materials is not recommended as particles can damage bearings.
18. Abrasive sanding drums should be the recommended diameter of the manufacturer.
19. Replace worn, frayed or torn abrasives as injury to the user, or the machine, may result.
20. Always keep your face and hands clear of moving parts such as discs, belts and pulleys.
21. Keep power supply cords free of any sharp or moving parts. Damaged cords can result in electric shock.
22. Always support the workpiece with the table.
23. Remove material or debris from the work area. Keep work area neat and clean.

### SAVE THESE INSTRUCTIONS.

**Refer to them often.**

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

## CONTENTS OF PACKAGE



### CONTENTS OF PACKAGE

- A** Sanding Base
- B** Table Bracket
- C** Rubber Sanding Drums (4): 3/4", 1", 1-1/2", 2"
- D** Sanding Sleeves (5): 1/2", 3/4", 1", 1-1/2", 2"
- E** Table Inserts (5): 1/2", 3/4", 1", 1-1/2", 2"
- F** Sanding Belt Attachment
- G** Sanding Belt 4" x 24"
- H** Limiting Plate



- I** Wrench 10mm & 13mm
- J** Miter Gauge
- K** Spindle Nut & Washer M8
- L** Sanding Drum Washers (2): 24mm, 45mm
- M** Sanding Belt Attachment Knob Washer
- N** Sanding Belt Attachment Knob
- O** Limiting Plate Locking Knob

## UNPACKING AND CLEAN-UP

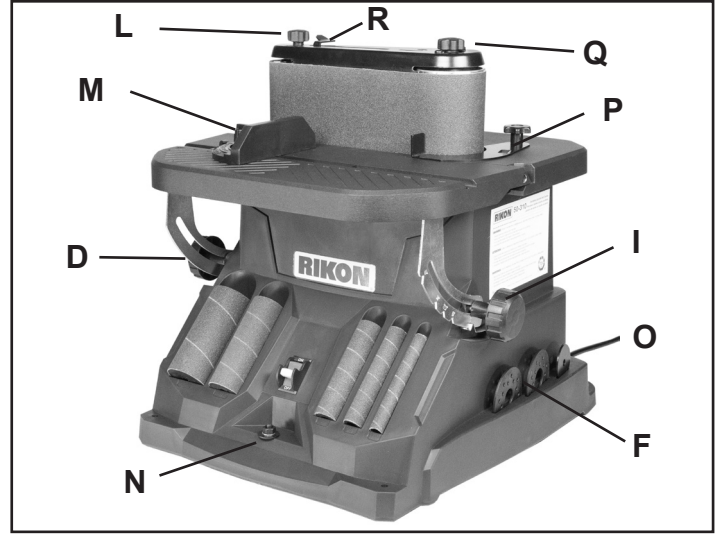
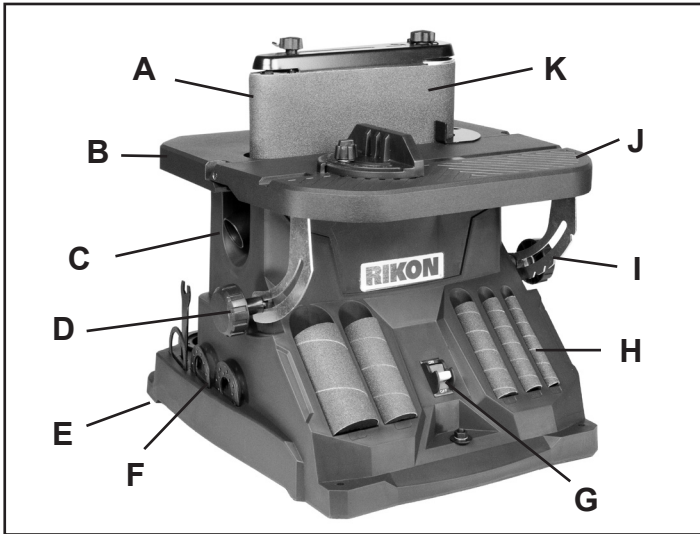
1. Carefully remove all contents from the shipping carton. Compare the contents with the list of contents to make sure that all of the items are accounted for, before discarding any packing material. Place parts on a protected surface for easy identification and assembly. If any parts are missing or 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. Take photographs for any possible insurance claims.
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.



### CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to [www.P65Warnings.ca.gov/wood](http://www.P65Warnings.ca.gov/wood)

## GETTING TO KNOW YOUR MACHINE



- A Belt Sanding Attachment
- B Work Table
- C Dust Port
- D Table Angle Locking Knob
- E Rubber Feet (4)
- F Table Insert & Tool Storage
- G ON / OFF Safety Switch
- H Drum & Spindle Storage
- I Table Angle Scale and Locking Handle

- J Tilting Work Table
- K Sanding Belt 4" x 24"
- L Belt Tracking Knob
- M Miter Gauge
- N Spindle Nut & Washer Storage
- O Power Cord
- P Limiting Plate & Locking Knob
- Q Sanding Belt Attachment Knob
- R Belt Tension Lever



REAR VIEW

## INSTALLATION

### MOVING & INSTALLING THE SANDER

**CAUTION** When moving the sander, lift the machine with your hands positioned under the base. DO NOT carry or move it using the attached work table.

1. The machine should be firmly bolted to a stand or solid, level workbench to avoid any movement of the machine during use. The sander's base has holes for this purpose (mounting hardware is not included).

For portability and secure clamping of the sander to a workbench, the machine can be first permanently

bolted to a piece of plywood. Then the sander can be positioned on your workbench, or other solid surface, and the plywood can be clamped in place to secure the sander for use. After use, the plywood can be unclamped and the sander stored for future use.

2. When positioning the machine for work, locate it in an area that has ample space around the sander for the moving of projects to be sanded. Align the machine so that it will not face aisles, doorways, or other work areas that bystanders may be in. Do not locate or use the machine in damp or wet conditions. Use a Dust Collector to capture the fine dust that is created when sanding. See the safety instructions.

## ASSEMBLY

The 50-310 Oscillating Sander is unique as it is really 2-Sanders-in-1.

- Use the various diameter vertical spindles for sanding those hard to reach curves and holes that are in your projects design.
- With the special sanding attachment, the 50-310 converts to a 4" x 24" Belt Sander! Perfect for sanding straight edges and flats. Plus, the two end drums can

also be used for some curved project sanding!

The 50-310 Sander's table can be tilted from 0° to 45° for bevel sanding with the spindle or belt.

The following instructions show the assemblies of the two sanding options and the changes required to switch between the machine's setups.



## ASSEMBLY

### INSTALL SPINDLE SANDER DRUM & PAPER

The sander is supplied with 1 universal spindle (drive shaft) that the 4 rubber Sanding Drums slide onto and then hold sandpaper sleeves of various grits for sanding.

**NOTE:** The 1/2" sanding sleeve installs directly onto the machine's 1/2" universal spindle without a rubber drum.

The 4 rubber Sanding Drums include 3/4", 1", 1-1/2", and 2" diameters. At the top will be installed a nut, lock washer and washer that when tightened, compresses and expands the rubber drum to secure the cylindrical sandpaper sleeve in place. **NOTE:** Do not over-tighten the top nut as this will over-distort the rubber body and sanding sleeve, and may damage the spindle shaft's threading. Figure 4.

*To Install the Drums and Sanding Sleeves;*

1. UNPLUG THE MACHINE
2. Install the Table Bracket into the table. FIG. 1

3. Install the appropriate size Table Insert for the drum size to be used. FIG. 2.

**NOTE:** ALWAYS use a table insert when sanding. It is important to use the correct size to reduce the risk of a pinch injury.

4. Slide desired sized rubber Sanding Drum over the Spindle Shaft. FIG. 2. Then install the corresponding Sanding Sleeve onto the drum. FIG. 3.

5. Install the appropriate size Washer, Lock Washer and Top Nut onto the spindle's top threaded end. Tighten the nut to expand the rubber body. This will secure the sanding sleeve in place. FIG. 4.

*To Remove a Sandpaper Sleeve from a Spindle;*

1. Take off the top nut with a wrench, remove the two washers, and slide the sleeve off of the rubber spindle.

**NOTE:** If removal was difficult, sprinkle a small amount of talcum powder onto the rubber drum to aid in installing a new sandpaper sleeve.

2. To install a new sandpaper sleeve onto a spindle, follow previous steps 1 to 5 above.

**NOTE:** If the lower portion of the sanding sleeve is worn from extensive sanding, remove and turn the sleeve over to use the unused upper section.

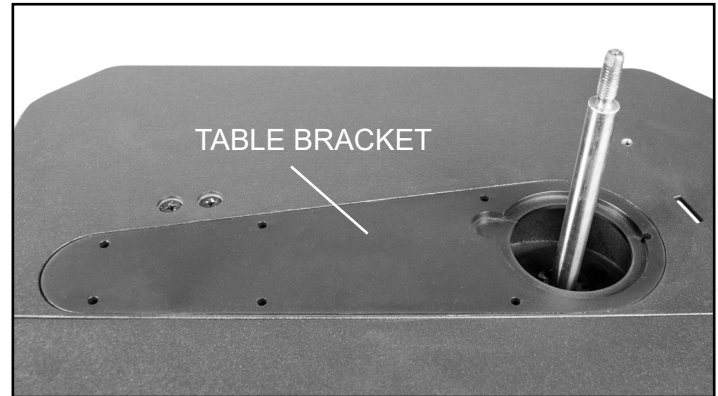


FIG. 1

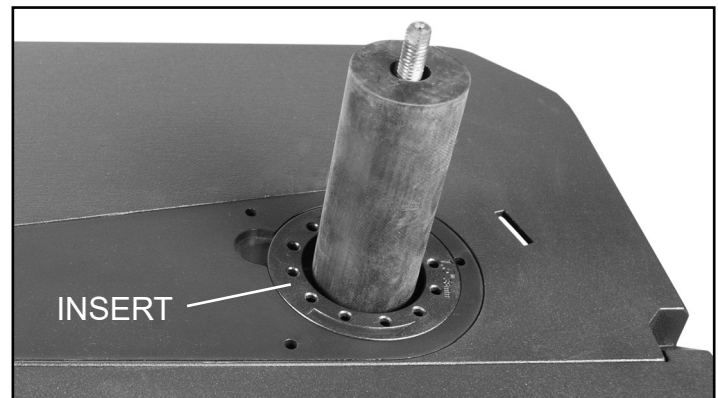


FIG. 2

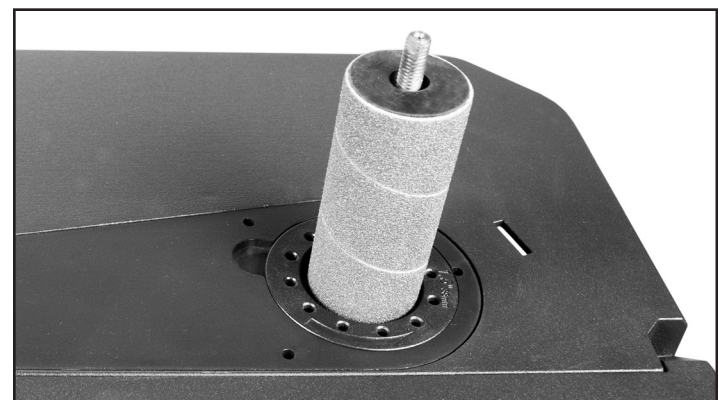


FIG. 3

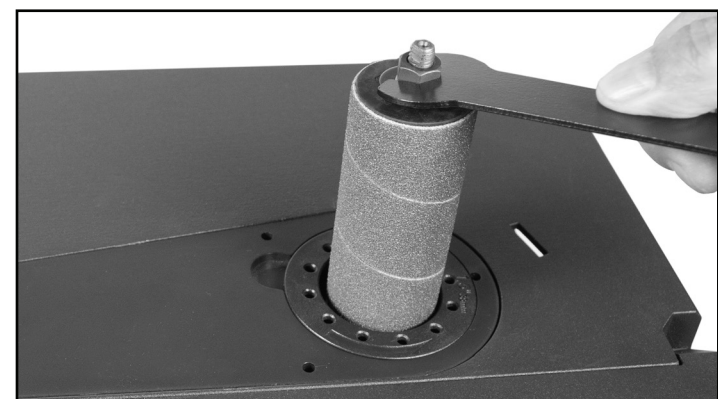


FIG. 4

## ASSEMBLY

### INSTALL BELT SANDER ATTACHMENT

To configure the machine for Belt sanding, you must first remove any installed Spindle sanding components as referenced in the directions on page 9 and below.

#### 1. UNPLUG THE MACHINE

2. Remove the Spindle Nut, Lock Washer and Washer, to remove the Sanding Sleeve and Sanding Drum from the machine's Drive Shaft.

3. Remove the Table Insert and Work Table Bracket from the table.

*To Install the Belt Sander Attachment;*

4. Install the Sanding Belt Attachment by sliding the unit over the drive spindle (FIG. 5, A), and insert its lower 'T' Stud into the table's 'T' groove provided for this. (FIG. 5, B).

Make sure that the 4 notches on the base of the attachment's large Drum fit into the holes of the factory installed plastic Connector Plate, FIG. 6, A. If the recesses do not engage, turn the abrasive belt (large drum) by hand until they engage.

5. Secure the Sanding Belt Attachment in place with the Washer (Parts List #79) and Belt Sanding Attachment Knob (80). FIG. 7.

6. If not previously installed by the factory, install the Limiting Plate (69) with the Locking Knob (70). FIG. 8.

The upturned end of this plate will act as a 'stop' for your work when sanding. It can be removed if needed for sanding long work pieces. FIG. 9.

See page 12 for information on changing and adjusting the sanding belt.

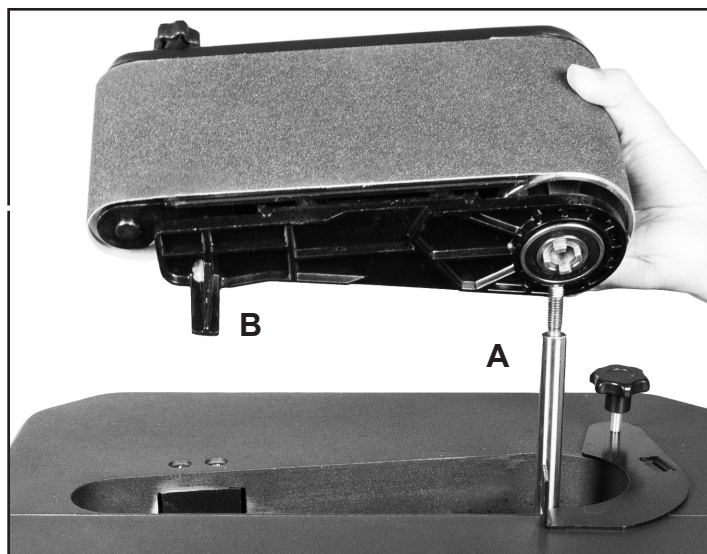


FIG. 5

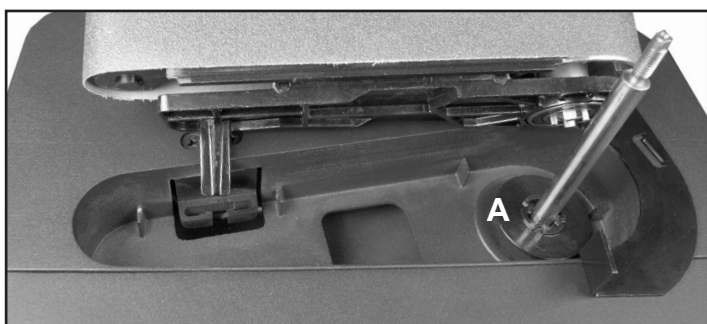


FIG. 6



FIG. 7

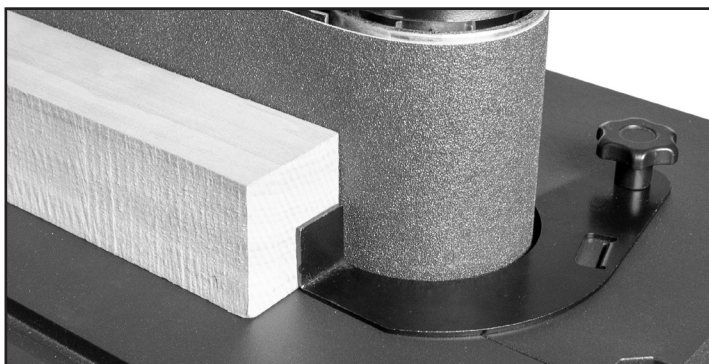


FIG. 9



FIG. 8



## OPERATION

### ON/OFF SWITCH

**CAUTION:** Make sure that the On/Off locking switch is in the 'OFF' position before plugging the dust collector into a power source.

The On/Off Locking Switch has a center key that can be used to prevent unauthorized use of the sander. The switch needs to have the center key inserted before the machine can be used. FIG. 10.

**CAUTION:** Never walk away from sander when machine is running. Always lock the switch in the Off position and unplug from the power supply when not in use.

**WARNING** Before turning on the machine, review the safety precautions listed on pages 3 to 6. Make sure that you fully understand the features, adjustments and capabilities of the machine that are outlined throughout this manual.

**WARNING** THE MACHINE MUST NOT BE PLUGGED IN AND THE POWER SWITCH MUST BE IN THE OFF POSITION UNTIL ALL ADJUSTMENTS ARE COMPLETE.

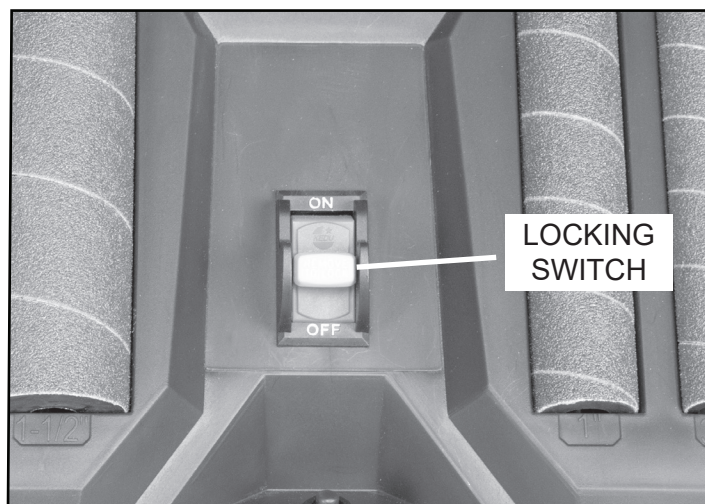


FIG. 10

### USING THE OSCILLATING SPINDLE SANDER

1. Start the machine and wait until the motor has build up to full speed. The 50-310 Sander features a spindle that automatically oscillates (moves up and down) 16mm (5/8"). This movement ensures that the spindle's sandpaper gets maximum sanding use along the sleeve, and not wear in just one area.

**NOTE:** If the lower portion of the sanding sleeve is used, turn the sleeve over to use the upper section.

**CAUTION** NEVER START THE MACHINE WITH WORK IN CONTACT WITH THE SPINDLE

2. Looking from the front of the machine, the motor turns in a counterclockwise direction. Feed the work across and with the direction of the spindle rotation. FIG. 11.

3. **NEVER** feed the work into the machine and stand with your body directly behind it. The machine could force the work into the operator and cause serious injury.

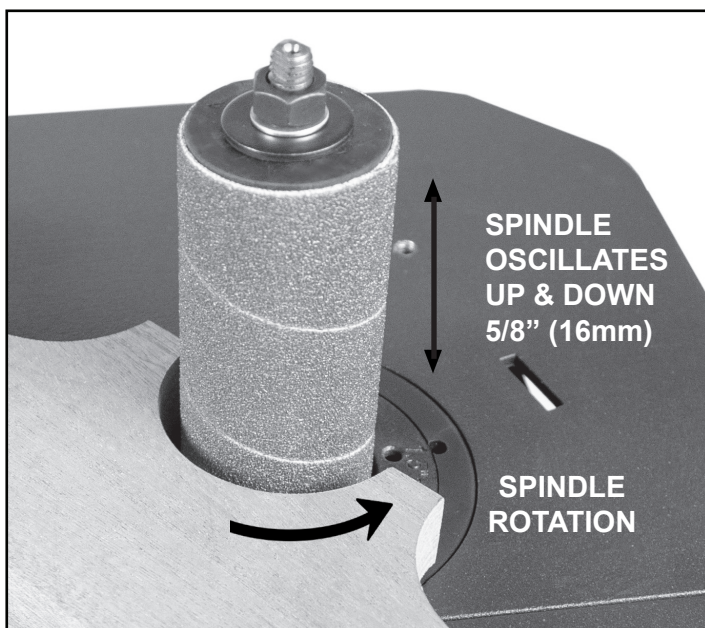


FIG. 11

### MOUNTING THE SANDER TO A WORKBENCH

**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, and at a suitable, safe height for your sanding work to be carried out.

See Page 18 for replacement Sanding Sleeves and Sanding Belts.

## OPERATION

### USING THE OSCILLATING BELT SANDER

1. Start the machine and wait until the motor has build up to full speed. The 50-310 Sander features a 2" x 4" Sanding Belt that automatically oscillates (moves up and down) 16mm (5/8"). This movement ensures that the Belt's sandpaper gets maximum sanding use along the belt and not wear in just one area. FIG. 12.

2. Use both hands to securely hold a workpiece against the belt. For straight line sanding you can use the Limiting Plate as a guide. The upturned end of this plate will act as a 'stop' for your work when sanding. It can be removed if needed for sanding long work pieces. FIG. 13.

3. When sanding inside curves, the ends of the Belt Sander Attachment can be used like a spindle sander.

**NOTE:** Always use both hands to control the workpiece. Never force the piece into the sanding belt which puts excessive pressure and wear on the sandpaper and may affect the machine's operation.

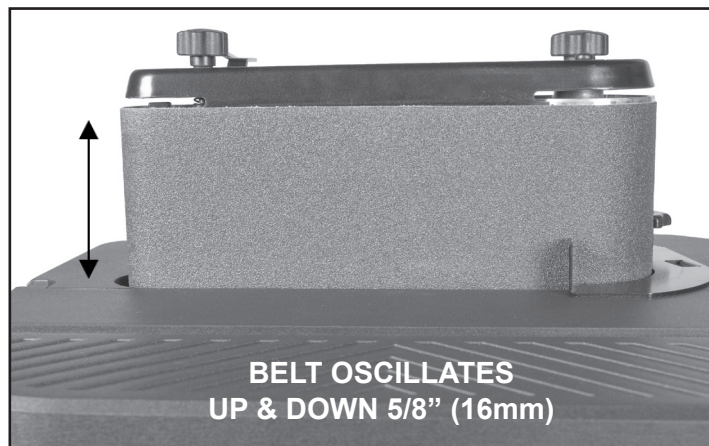


FIG. 12

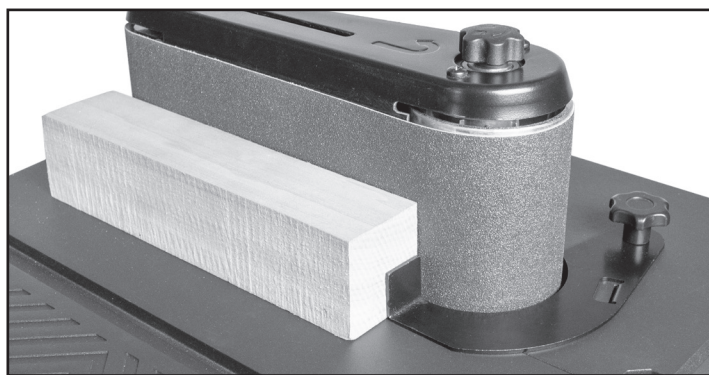


FIG. 13

### CHANGING THE SANDING BELT

#### 1. UNPLUG THE MACHINE

2. To release the tension on the sanding belt, slide the Belt Tension Lever to the right, towards the embossed direction arrow and the large belt driving drum. FIG. 14.

3. To remove the sanding belt, slide the belt up over the Belt Sanding Attachment.

4. To install a new sanding belt, slide the belt down into position on the Belt Sanding Attachment. Match the running direction marked on the belt with the sander's rotation.

5. Apply tension to the new belt by sliding the Belt Tension Lever back to the left.

6. Make sure belt tracks correctly. Plug the machine in and turn it on. Do not attempt to sand any material. By turning the Belt Adjusting Knob on the top left, you can move the position of the belt up or down. FIG. 15.

**NOTE:** Make sure the bottom of the belt does not oscillate above the top of the work surface.

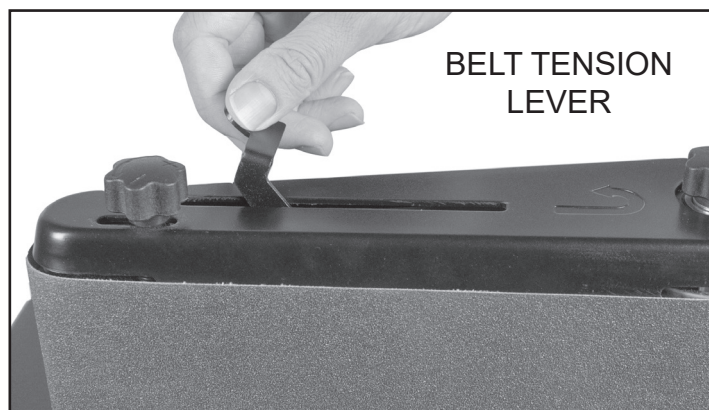


FIG. 14

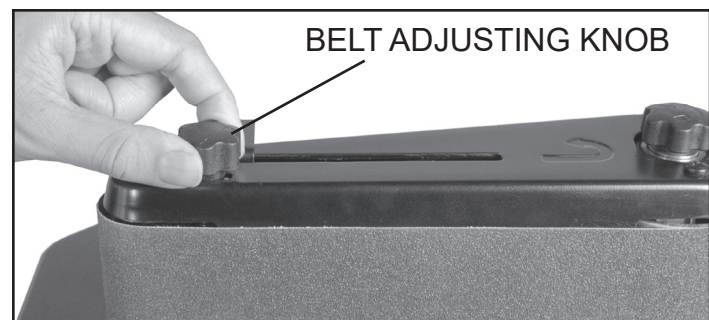


FIG. 15



## OPERATION

### TILTING THE TABLE FOR BEVEL SANDING

The work table on the 50-310 can tilt from 0 to 45 degrees. The curved Table Adjustment Support has detents at 0, 15, 22.5, 30 and 45 degrees. This allows you to sand or add bevels to your work. FIG. 16.

To tilt the work table:

1. Loosen the 2 large side Knobs, Fig. 16, A, that secure the curved table brackets (B) in position.
2. Push down the Spring Block that is under the right Support, Fig. 16, B, with the angle detents. Fig. 16.
3. Move the front hinged, movable Table to your desired angle. Use the notched detents for the preset table angles or any other angles needed.
4. Release the Spring Block and re-tighten the two side knobs to fix the tilted table in place.

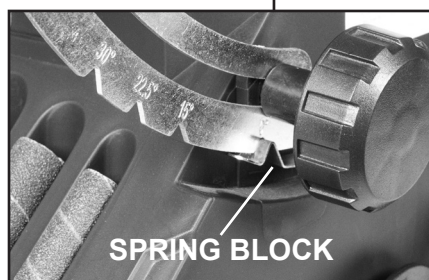


FIG. 16

### USING THE MITER GAUGE

A Miter Gauge is supplied with your sander, and can be used on the table, which has a slot in its design to fit the miter gauge's bar.

The miter gauge head can be set anywhere up to 60° (right or left) by loosening the lock-knob, setting the miter gauge head to the desired angle and re-tightening the lock-knob. FIG. 17.

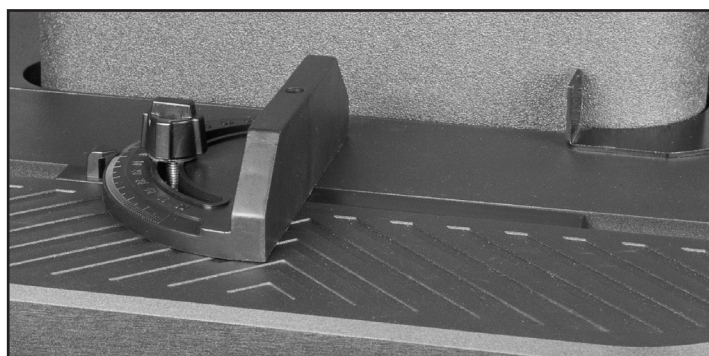


FIG. 17

### DUST EXTRACTION

Sanding operations are inherently dusty. To help minimize the amount of dust that escapes into the surrounding air, this sander is equipped with a 38mm diameter Dust Port that can be easily connected to a dust-collection system. This is located on the left side of the machine directly under the table. FIG. 18.

Attach your shop's dust collector hose to this dust port to collect the dust produced while sanding.



FIG. 18

**⚠ CAUTION** DO NOT operate the sander without a dust collector and wear a protective dust mask. Sanding creates substantial amounts of dust which can be harmful to your respiratory system!

For RIKON Dust Collectors and Accessories contact your local RIKON Tool Distributor, or visit [www.rikontools.com](http://www.rikontools.com) for more information.

## 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 and plug for any damage.                        | Before each use. |
| 2. Check sanding spindles and sleeves for damage or wear.               | Before each use. |
| 3. Check all guards and hardware to make sure they are secure.          | Before each use. |
| 4. Check all moving parts for alignment and binding issues.             | Before each use. |
| 5. Dress/Clean sanding surfaces for best abrasive action.               | As needed        |
| 6. Replace sanding sleeves when worn or damaged.                        | As needed.       |
| 7. Clean and vacuum dust from the motor housing and other sander parts. | As needed.       |

### FREQUENCY

**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.

**WARNING:** If blowing sawdust, wear proper eye protection to prevent debris from blowing into eyes.

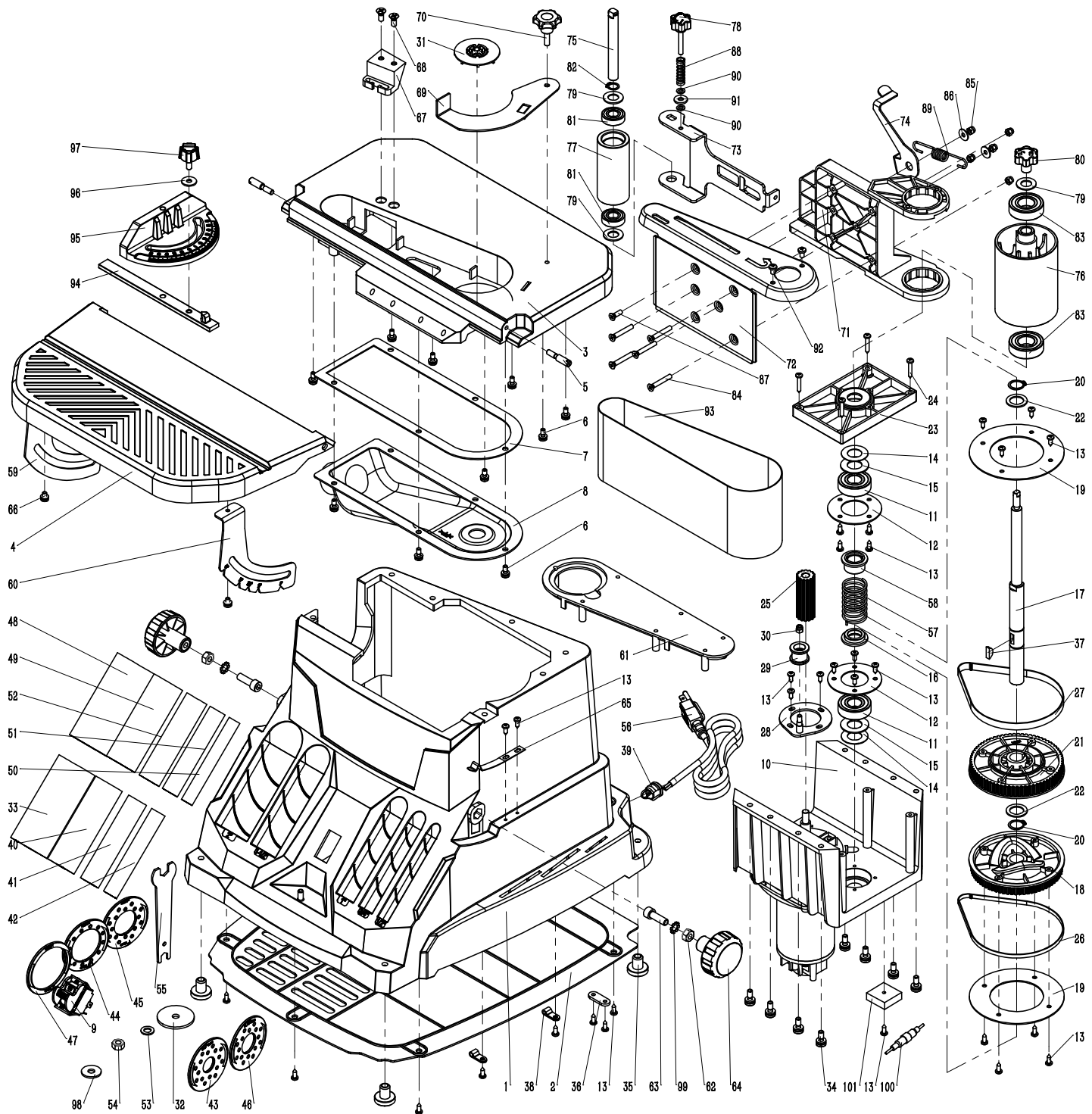
**Service beyond recommended maintenance on these tools  
should only be performed by an authorized, qualified technician.**

## TROUBLESHOOTING

| PROBLEM                                     | POSSIBLE CAUSE   | SOLUTION   |
|---|--|--|
| Sander will not start                       | <ol style="list-style-type: none"> <li>1. Sander unplugged from wall</li> <li>2. Fuse blown or circuit breaker tripped</li> <li>3. Cord is damaged</li> <li>4. Safety Lock is removed or the ON/OFF switch is damaged</li> <li>5. Motor capacitor has failed</li> </ol>                    | <ol style="list-style-type: none"> <li>1. Check all plug connections</li> <li>2. Replace fuse or reset circuit breaker</li> <li>3. Replace the cord</li> <li>4. Insert the safety lock or replace damaged switch</li> <li>5. Replace capacitor</li> </ol>                    |
| Sander does not come up to speed            | <ol style="list-style-type: none"> <li>1. Extension cord is too light or too long</li> <li>2. Low current</li> <li>3. Too much pressure sanding</li> </ol>   | <ol style="list-style-type: none"> <li>1. Replace with adequate size and length of cord</li> <li>2. Contact a qualified electrician</li> <li>3. Reduce pressure against sandpaper</li> </ol>   |
| Machine vibrates excessively                | <ol style="list-style-type: none"> <li>1. Work table or base is on an uneven surface</li> </ol>  | <ol style="list-style-type: none"> <li>1. Adjust the table or base so that it rests evenly</li> <li>2. Bolt down the machine</li> </ol>  |
| Sanding marks or burns on the wood          | <ol style="list-style-type: none"> <li>1. Workpiece is held still too long</li> <li>2. Wrong grit of sanding sleeve/belt</li> <li>3. Feed pressure is too great</li> <li>4. Sanding against the wood grain</li> <li>5. Sanding sleeve or belt is covered with residue or grease</li> </ol> | <ol style="list-style-type: none"> <li>1. Keep the workpiece moving</li> <li>2. Use coarser grit for stock removal, fine grit for finish sanding</li> <li>3. Never force the workpiece</li> <li>4. Sand with the grain</li> <li>5. Replace sanding sleeve or belt</li> </ol> |
| Sanding belt comes off of the drive pulleys | <ol style="list-style-type: none"> <li>1. Belt does not run straight</li> </ol>  | <ol style="list-style-type: none"> <li>1. Reset the belt tracking</li> </ol>   |

# PARTS DIAGRAM

## OSCILLATING BELT/SPINDLE SANDER 50-310



**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.

**See pages 16 & 17  
for the Parts Lists**

# PARTS LIST - 50-310

## 50-310 OSCILLATING SPINDLE/BELT SANDER

| KEY NO. | DESCRIPTION   | QTY. | PART NO.   |
|---------|---|------|------------|
| 1       | Base  | 1    | P50-310-1  |
| 2       | Baseplate   | 1    | P50-310-2  |
| 3       | Fixed work table  | 1    | P50-310-3  |
| 4       | Movable work table  | 1    | P50-310-4  |
| 5       | Pin shaft   | 2    | P50-310-5  |
| 6       | Phillips screw, spring washer, flat washer assembly M5x12 | 12   | P50-320-15 |
| 7       | Rubber washer 282x110x1.5mm                               | 1    | P50-310-7  |
| 8       | Dust port   | 1    | P50-310-8  |
| 9       | Switch HY7  | 1    | P50-320-10 |
| 10      | DC motor  | 1    | P50-320-23 |
| 11      | Bearing 6203-2RZ  | 2    | P50-320-30 |
| 12      | Press plate   | 2    | P50-320-26 |
| 13      | Self tapping screw ST4.2x12                               | 32   | P50-320-2  |
| 14      | Rubber pad  | 2    | P50-320-24 |
| 15      | Felt pad  | 2    | P50-320-25 |
| 16      | Shaft sleeve 2  | 1    | P50-320-27 |
| 17      | Main shaft  | 1    | P50-310-17 |
| 18      | 69 Tooth Cog wheel  | 1    | P50-320-21 |
| 19      | Pressure plate with wheel                                 | 2    | P50-320-18 |
| 20      | Retaining Ring 17   | 2    | P50-320-16 |
| 21      | 70 Tooth wheel  | 1    | P50-320-20 |
| 22      | Spring cushion  | 2    | P50-320-17 |
| 23      | Support board   | 1    | P50-320-31 |
| 24      | Self tapping screw ST4.2x25                               | 4    | P50-320-32 |
| 25      | Motor pulley  | 1    | P50-320-34 |
| 26      | Cog belt 160XLx6mm  | 1    | P50-320-22 |
| 27      | Cog belt 160XLx10mm                                       | 1    | P50-320-19 |
| 28      | Tightening bracket assembly                               | 1    | P50-320-33 |
| 29      | Tightening wheel assembly                                 | 1    | P50-320-35 |
| 30      | Non-metallic nut M5                                       | 1    | P50-320-36 |
| 31      | Connector   | 1    | P50-310-31 |
| 32      | Drum plate  | 1    | P50-320-40 |
| 33      | 2" Drum   | 1    | P50-320-38 |
| 34      | Phillips screw, spring washer, flat washer assembly M6x16 | 8    | P50-320-3  |
| 35      | Foot  | 4    | P50-320-1  |
| 36      | Cord joint  | 1    | P50-320-6  |
| 37      | Semicircle key 5x6.5                                      | 1    | P50-320-28 |
| 38      | Install wire fixing button UL-1/4                         | 2    | P50-310-38 |
| 39      | Cord Clip 6P4   | 1    | P50-320-9  |
| 40      | 1.5" Drum   | 1    | P50-320-57 |
| 41      | 1" Drum   | 1    | P50-320-45 |
| 42      | 0.75" Drum  | 1    | P50-320-52 |
| 43      | 0.5" Table insert   | 1    | P50-310-43 |
| 44      | 1.5" Table insert   | 1    | P50-310-44 |
| 45      | 1" Table insert   | 1    | P50-310-45 |
| 46      | 0.75" Table insert  | 1    | P50-310-46 |
| 47      | 2" Table insert   | 1    | P50-310-47 |
| 48      | 2" (51mm) Sanding sleeve 80#                              | 1    | P50-320-39 |
| 49      | 1.5" (38mm) Sanding sleeve 80#                            | 1    | P50-320-49 |
| 50      | 0.5" (13mm) Sanding sleeve 80#                            | 1    | P50-320-51 |

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For Parts under Warranty, the Serial Number of your machine is required.



## PARTS LIST - 50-310

| KEY NO. | DESCRIPTION  | QTY. | PART NO.   |
|---------|--|------|------------|
| 51      | 0.75" (19mm) Sanding sleeve 80#                          | 1    | P50-320-50 |
| 52      | 1" (26mm) Sanding sleeve 80#                             | 1    | P50-320-47 |
| 53      | Flat washer 8  | 1    | P50-320-42 |
| 54      | Nut M8   | 1    | P50-320-43 |
| 55      | Wrench   | 1    | P50-320-58 |
| 56      | Power cord with plug 3x18x1.8m                           | 1    | P50-310-56 |
| 57      | Spring   | 1    | P50-320-59 |
| 58      | Shaft sleeve 1   | 1    | P50-320-60 |
| 59      | Left work table support                                  | 1    | P50-310-59 |
| 60      | Right work table support                                 | 1    | P50-310-60 |
| 61      | Belt work table cover plate                              | 1    | P50-310-61 |
| 62      | Hex nut M8   | 2    | P50-310-62 |
| 63      | Hex screw M8x25  | 2    | P50-310-63 |
| 64      | Table locking knob                                       | 2    | P50-310-64 |
| 65      | Spring block   | 1    | P50-310-65 |
| 66      | Phillips screw, spring washer, flat washer assembly M5x8 | 2    | P50-310-66 |
| 67      | Fixed slider   | 1    | P50-310-67 |
| 68      | Screw M6x14  | 2    | P50-310-68 |
| 69      | Limiting plate   | 1    | P50-310-69 |
| 70      | Limiting plate locking knob                              | 1    | P50-310-70 |
| 71      | Belt support   | 1    | P50-310-71 |
| 72      | Support cover plate                                      | 1    | P50-310-72 |
| 73      | Guide support  | 1    | P50-310-73 |
| 74      | Belt tension lever                                       | 1    | P50-310-74 |
| 75      | Driven shaft   | 1    | P50-310-75 |
| 76      | Drive drum   | 1    | P50-310-76 |
| 77      | Driven drum  | 1    | P50-310-77 |
| 78      | Belt adjusting knob                                      | 1    | P50-310-78 |
| 79      | Washer 13mm Ø  | 3    | P50-310-79 |
| 80      | Belt locking knob  | 1    | P50-310-80 |
| 81      | Bearing 6001-2RS   | 2    | P50-310-81 |
| 82      | External Circlip 12                                      | 1    | P50-310-82 |
| 83      | Bearing 6004-2RS   | 2    | P50-310-83 |
| 84      | Screw M5x35  | 5    | P50-310-84 |
| 85      | Non-metallic nut M5                                      | 5    | P50-310-85 |
| 86      | Big flat washer 5  | 2    | P50-310-86 |
| 87      | Screw M5x16  | 1    | P50-310-87 |
| 88      | Adjustable spring  | 1    | P50-310-88 |
| 89      | Tension spring   | 1    | P50-310-89 |
| 90      | Flat washer 5  | 2    | P50-310-90 |
| 91      | Rubber washer  | 1    | P50-310-91 |
| 92      | Phillips screw M5x8                                      | 2    | P50-310-92 |
| 93      | Belt   | 1    | P50-310-93 |
| 94      | Miter gauge bar  | 1    | P50-310-94 |
| 95      | Miter gauge  | 1    | P50-310-95 |
| 96      | Big flat washer 6  | 1    | P50-310-96 |
| 97      | Miter gauge knob M6x16                                   | 1    | P50-310-97 |
| 98      | Big flat washer 8  | 1    | P50-310-98 |
| 99      | External teeth lock washer 8                             | 2    | P50-310-99 |
| 100     | Fuse Link - 5x20mm 10A Glass Fuse 250V                   | 1    | P50-320-61 |
| 101     | Rectifier Bridge   | 1    | P50-320-62 |

**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.

**50-310 OSCILLATING SPINDLE/BELT SANDER**



# **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 five-year warranty does not cover products used for commercial, industrial or educational purposes. The warranty term for these claims will be limited to a two-year period.

This limited warranty does not apply to accessory items such as blades, drill bits, sanding discs, grinding wheels, belts, guide bearings 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 must be provided which has the date of purchase and an explanation of the complaint.

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 register your machine online, visit RIKON at [www.rikontools.com/warranty](http://www.rikontools.com/warranty)**

**To take advantage of this warranty, or if you have any questions,  
please contact us at 877-884-5167 or email [warranty@rikontools.com](mailto:warranty@rikontools.com)**

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The RIKON website has information regarding your machine, its accessories,  
the full line of other RIKON machines, accessories, and  
a listing of authorized RIKON Distributors in your area.





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