1” X 30” Belt / 5” Disc Sander

Model: 50-150

RIKON POWER TOOLS

Owner’s Manual

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

Serial number: _____

Date of purchase: _____

For more information:

www.rikontools.com or info@rikontools.com

For Parts or Questions:

techsupport@rikontools.com or 877-884-5167

Part # 50-150M1

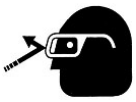
Operator Safety: Required Reading

IMPORTANT! Safety is the single most important consideration in the operation of this equipment. **The following instructions must be followed at all times.**

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.

General Safety Warnings

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

⚠ DANGER 	**ALWAYS GROUND ALL TOOLS.** If your tool is equipped with a three-pronged plug, you must plug it into a three-hole electric receptacle. If you use an adapter to accommodate a two-pronged receptacle, you must attach the adapter plug to a known ground. Never remove the third prong of the plug. **ALWAYS AVOID DANGEROUS ENVIRONMENTS.** Never use power tools in damp or wet locations. Keep your work area well lighted and clear of clutter.
⚠ DANGER 	**ALWAYS REMOVE THE ADJUSTING KEYS AND WRENCHES FROM TOOLS AFTER USE.** Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on. **ALWAYS KEEP YOUR WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
⚠ DANGER 	**ALWAYS KEEP VISITORS AWAY FROM RUNNING MACHINES.** All visitors should be kept a safe distance from the work area. **ALWAYS MAKE THE WORKSHOP CHILDPROOF.** **Childproof** with padlocks, master switches, or by removing starter keys.
⚠ DANGER 	**NEVER OPERATE A TOOL WHILE UNDER THE INFLUENCE OF DRUGS, MEDICATION, OR ALCOHOL**.
⚠ DANGER 	**ALWAYS WEAR PROPER APPAREL.** Never wear loose clothing or jewelry that might get caught in moving parts. Rubber-soled footwear is recommended for the best footing.
⚠ DANGER 	**ALWAYS USE SAFETY GLASSES AND WEAR HEARING PROTECTION.** Also use a face or dust mask if the cutting operation is dusty.
⚠ DANGER 	**NEVER OVERREACH.** Keep your proper footing and balance at all times.
⚠ DANGER 	**NEVER STAND ON TOOLS.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

⚠ DANGER **ALWAYS DISCONNECT TOOLS**.
Disconnect tools before servicing and when changing accessories such as blades, bits, and cutters.

ALWAYS AVOID ACCIDENTAL STARTING.
Make sure switch is in “OFF” position before plugging in cord.

NEVER LEAVE TOOLS RUNNING UNATTENDED.

⚠ DANGER **ALWAYS CHECK FOR DAMAGED PARTS.**

Before initial or continual use of the tool, a guard or other part that is damaged should be checked to assure that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other damaged parts should immediately be properly repaired or replaced.

Special Safety Rules For Belt & Disc 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 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 firmly mounted to a flat and secure work surface or stand.
6. Always wear protective eyewear prior to operating this machine.
7. Do not operate this machine if you are under the influence of drugs and/or alcohol.
8. Remove all jewelry prior to operating this machine.
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 when doing any assembly or setup operation.
12. 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.
13. The use of any accessories or attachments not recommended may cause injury to you and damage your machine.
14. This machine must be properly grounded.
15. Abrasive discs and belts should be the recommended width and length of the manufacturer.
16. Always keep your face and hands clear of moving parts such as belts and pulleys.
17. Keep power supply cords free of moving parts of the sander. Damaged cords can result in electric shock.
18. Maintain a 1/16” clearance between the sanding disc, sanding belt and tables.
19. Always support the workpiece with the table or backstop.
20. Remove material or debris from the work area. Keep work area neat and clean.
21. Keep these instructions for future reference.

SAVE THESE INSTRUCTIONS.
Refer to them often.

Table of Contents

Specifications

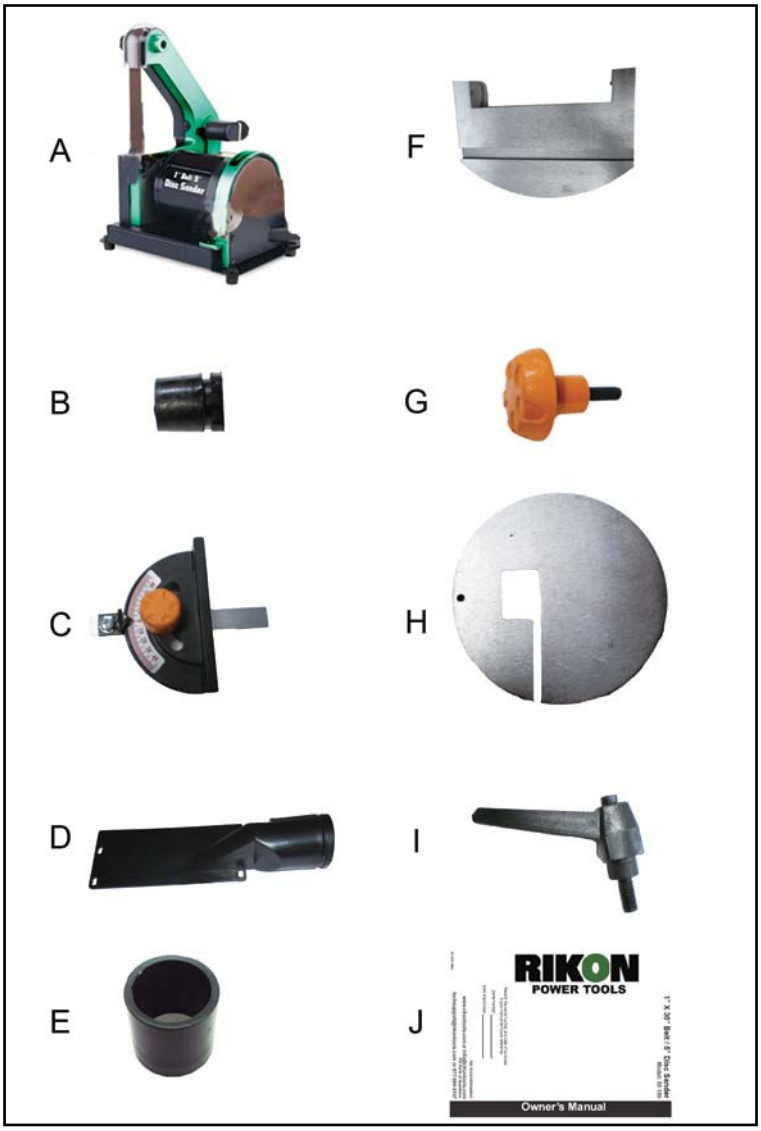
Belt Size	1” x 30”
Belt Speed	3340 SFPM
Belt Grit	A100
Disc Size	5”
Motor	1/3 HP
Amps	2.3 A, 60 Hz
Volts	120 V
Net Weight	15 lbs 6 oz

Contents of Package

When unpacking, check to make sure the following parts are included. If any parts are missing or broken, please call RIKON Power Tools at the number on the cover of this manual as soon as possible.

Carton Contents

Item	Description	Qty
A	Belt & disc sander assembly	1
B	Rubber Foot	4
C	Miter Gauge	1
D	Sanding Disc Cover	1
E	Dust Nozzie Adapter	1
F	Disc Work Table	1
G	Locking knob for table	2
H	Belt Work Table	1
I	Locking Knob Assembly	1
J	Owner's manual	1



List of loose parts in bag

Description	Qty	Description	Qty
Washer 5 mm	4	Washer 6mm	4
Philips Screw M5x10	4	Hex "L" wrench 3mm	1
Washer 8 mm	1	Hex "L" wrench 4mm	1

Assembly

Before You Start – Assembly and Installation

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

Mounting the Sander to the 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.

1. Rubber feet were not fastened to this sander prior to shipping. Do not install rubber feet when attaching sander to a bench or stand.
2. Position the sander on the workbench.
3. Mark the workbench through the four mounting holes located in the sander base (holes for rubber feet).
4. Drill holes in the workbench at the marks.
5. Using long bolts, washers, lock-washers and nuts, as shown (not supplied), secure the sander to the workbench.

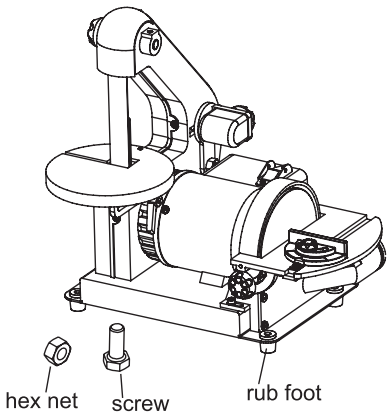


Fig. 01

Dust Chute Installation – Disc Sander

1. Fasten the sanding disc dust-chute to the machine using the four Phillips M5 long screws

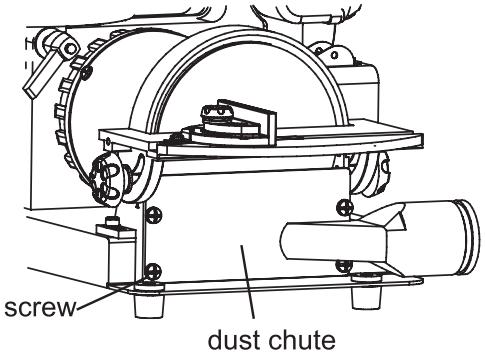


Fig. 02

Assembling the Belt Sander Table

WARNING! When assembling the belt & disc sander, ensure the machine is disconnected from any power source.

1. Locate the belt-sanding table. (Part # 41 on Parts Schematic)
2. Position the table by threading the belt and plate through opening in table.
3. Fasten the table by using the table-adjustment knob .
4. Bring the adjustment knob screw through the opening on the underside of the table, then through the mounting bracket into the nut.
5. Fasten by using the adjustment handle to turn the integral screw into the nut.

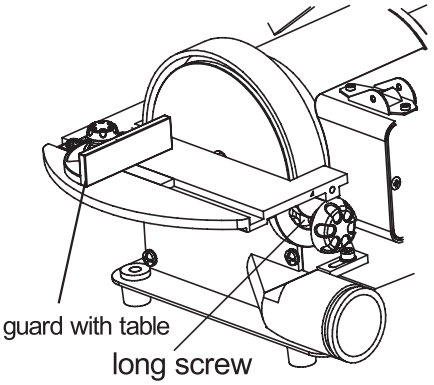


Fig. 03

Assembling the Sanding Disc Table and Mitre Gauge

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

1. Position the disc-sanding table by tipping it up and threading the small nipples on the back side of the ‘angle-gauge’ onto the mounting area of the disc-sander.
2. Align the screw holes so that the screw will travel through the angle-gauge openings on either side of the disc into the mounting holes on the disc sander.
3. Using the disc-table adjustment handles, fasten the table to the sander.
4. When required, install the mitre-gauge into the slot on the disc-sanding table.

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 90º 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. To ensure and check the positive-stop 90º angle, proceed as follows:

1. Loosen the table-locking lever.
2. Tilt the table to the rear as far as possible.
3. Using a square, protractor or other tool shown verify or adjust the table angle to ensure a 90º angle.
4. To set the sanding angle to a different angle, tilt table to the front until it is at the required angle.
5. Tighten the table-locking lever.

Disc Table Adjustments

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

1. To check the trueness of the 90º angle of the disc-sanding table, place a square or other measuring device on the table with the other end against the sanding disc.
2. Loosen disc-table adjustment handles, and adjust table angle to 90º.
3. Retighten disc-table adjustment handles.
4. To adjust disc table to another angle, loosen disc-table adjustment handles;
5. Set table at desired angle.
6. Retighten disc-table adjustment handles.

Installing or Changing Accessories – Sanding Discs

WARNING! Turn the power off and remove the plug from the outlet before changing the accessories.

Note: Hook & Loop sanding discs cannot be used with this type of sander!

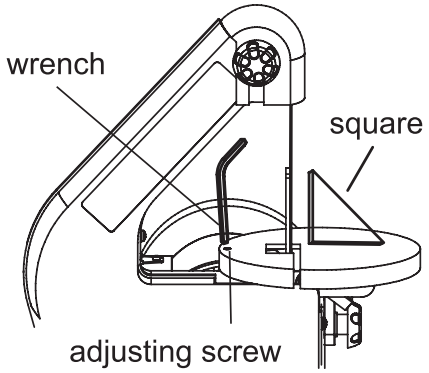


Fig. 04

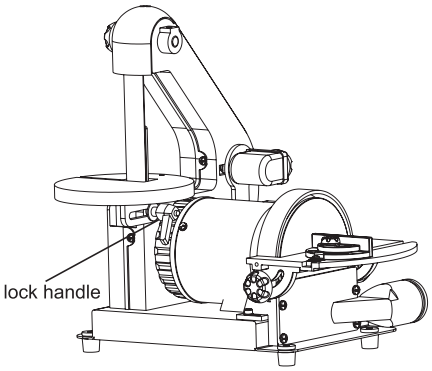


Fig. 05

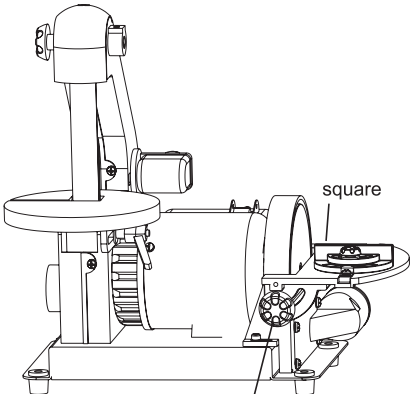


Fig. 06

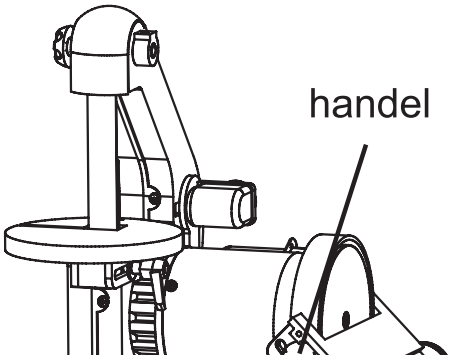


Fig. 07

Removal:
1. Remove and set aside mitre gauge.
2. Completely remove the disc-table adjustment handles.
3. Tip table up and remove.
4. Sanding discs are adhered to the plate using a “pressure-sensitive adhesive”. Remove sanding disc from disc plate.

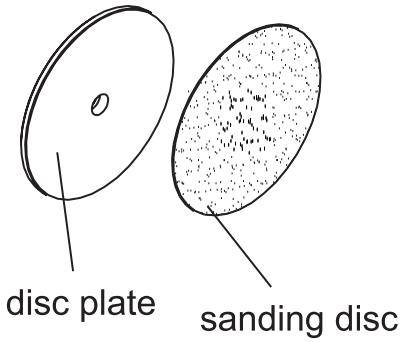


Fig. 08

Installation:
5. Ensure disc-plate is clean.
6. Peel backing from new sanding disc.
7. Press new sanding disc firmly onto disc-plate.
Note: Hook & Loop sanding discs cannot be used with this type of sander!
8. Replace the sanding table and handles that were removed in step 2 (above).

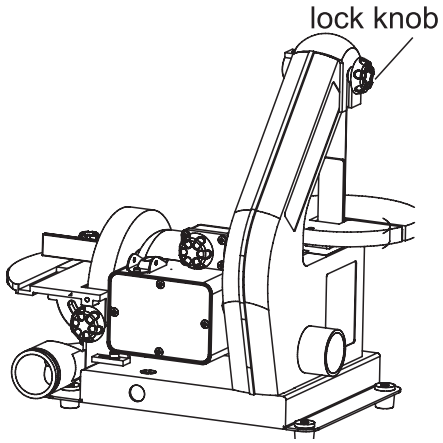


Fig. 09

Installing or Changing Accessories – Sanding Belts

WARNING! Turn the power off and remove the plug from the outlet before changing the accessories.

Removal:
1. Remove lock-knob and two Phillips screws;
2. Remove side cover.
3. Loosen tracking knob to release belt tension.
4. Remove belt from three wheels.

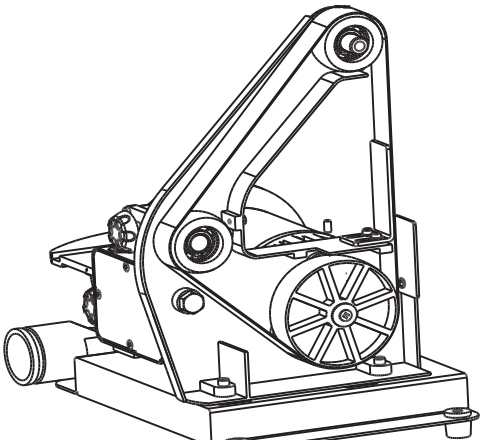


Fig. 10

Installation:
5. Install new belt.
6. Replace side cover.
7. Before using, check belt tracking as described in “Belt Tracking” section, and adjust as necessary.

Belt Tracking

The belt-tracking adjustment is set at the factory so that the abrasive belt will run true on the pulleys. If, however, the belt should track to one side or the other, an adjustment can be made by turning the tracking knob, which is located on the back side of the machine. Turning the knob clockwise will cause the belt to track to the right (towards the disc sander mechanism). Turning the knob counter-clockwise will cause the belt to track to the left side of the machine.

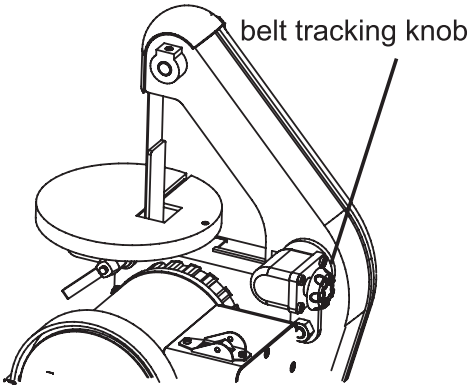


Fig. 11

Dust Chutes/Ports – Operation

Sanding operations are inherently dusty. To help minimize the amount of dust that escapes into the surrounding air, this Mastercraft sander is equipped with two 1 1/2” (38 mm) dust chutes (aka: ports) that can be easily connected to a dust-collection system. There is one dust chute for the belt-sanding system and another for the disc-sanding system. It is strongly recommended that users employ a dust-collection system when using this belt & disc sander.

Use of a mask or respirator is still recommended even when a dust-collection system is in use.

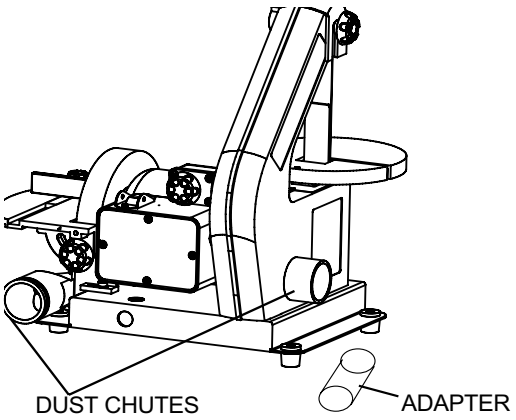


Fig. 12

Electrical Requirements

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor, with insulation having an outer surface that is green with or without yellow stripes, is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Use only three wire extension cords that have three-prong grounding plugs and three-pole receptacles that accept the tool's plug.*

Repair or replace a damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet that looks the one illustrated in Figure A below. The tool has a grounding plug that looks like the grounding plug as illustrated in Figure A below. A temporary adapter, which locks like the adapter as illustrated in Figure B below, may be used to connect this plug to a two-pole receptacle, as shown in Figure B if a properly grounded outlet is not available.** The temporary adapter should only be used until a properly grounded outlet can be installed by a qualified electrician. The green colored rigid ear or tab, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box.

* Canadian electrical codes require extension cords to be certified SJT type or better.
** Use of an adapter in Canada is not acceptable.

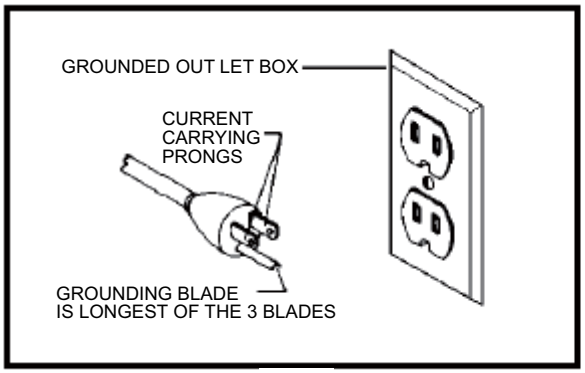


Fig. A

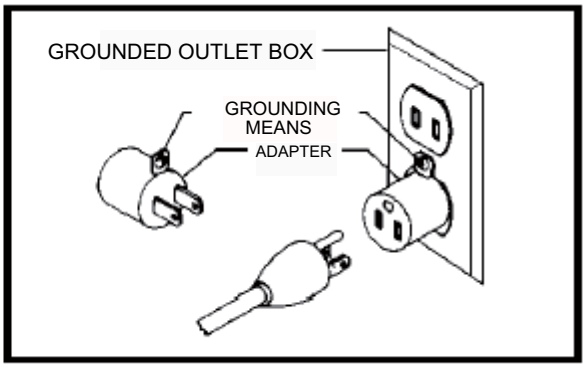
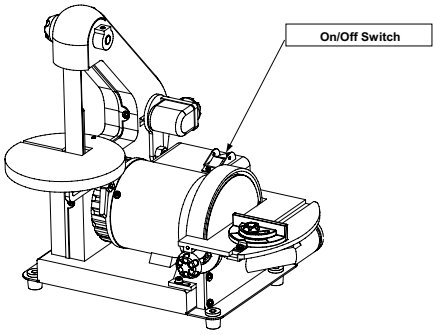


Fig. B

General Usage and Maintenance

General Usage and Operating Instructions

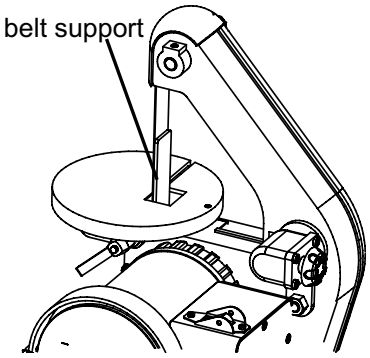
ON/OFF



The rocker ON/OFF power switch is located on the top of the sander.
1. Press the side marked ON to turn the sander on.
2. Press the side marked OFF to turn the sander off.

Operating Instructions – Belt Sander Platen

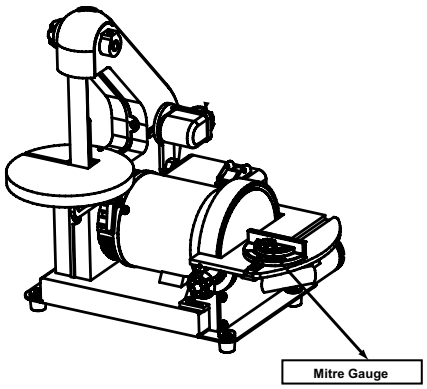
The platen is a heavy steel support plate that is positioned behind the sanding belt, rising from the table level to a point several inches above the table level. Its purpose is to support the work when sanding. The platen should be adjusted so that it is almost touching the back of the sanding belt. This can be done by loosening the two hex screws that fasten the bottom of the platen to the sander frame. If the platen is out of alignment for some reason, loosen these two screws, adjust the platen, and retighten the two screws.



To remove the platen for operations such as strapping, polishing or other special operations, remove the two screws that fasten the bottom of the platen to the frame, and remove the platen.

Mitre Gauge – Disc Sander

A mitre gauge is supplied with your sander, and can be used on the disc table, as shown. The mitre gauge head can be set anywhere up to 45º (right or left) by loosening the lock-knob, setting the mitre gauge head to the desired angle and retightening the lock-knob.



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		**Frequency**
1.	Check power cord	Before each use.
2.	Check sanding belts and discs for damage	Before each use.
3.	Check moving parts for alignment and binding issues	Before each use.
4.	Dress sanding surfaces	As needed
5.	Replace sanding belts or discs (see manual section for specifics)	As needed.
6.	Clean and vacuum dust from the motor housing and other sander parts	As needed.

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

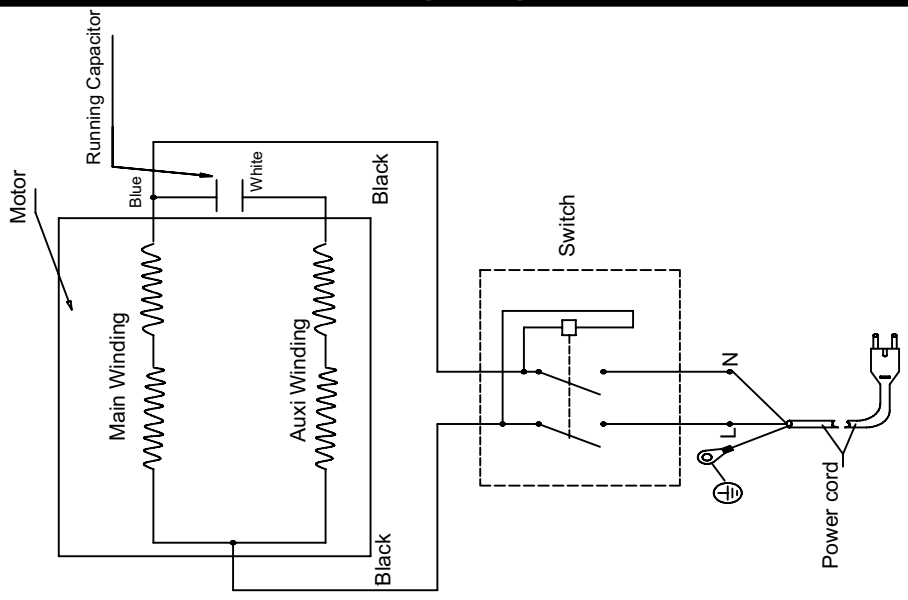
Troubleshooting

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

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Sanding grains easily rub off belt or discs.	1. Sanding belt/disc has been stored in an incorrect environment. 2. Sanding belt/disc has been damaged or folded.	1. Ensure sanding accessories are stored away from extremely hot or dry temperatures. 2. Store sanding accessories flat – not bent or folded.
Deep sanding grooves or scars in work piece.	1. Sanding belt/disc grit is too coarse for the desired finish. 2. Work piece sanded across the grain. 3. Too much sanding force on the work piece. 4. Work piece held still against the belt-disc for too long.	1. Use a finer-grit sanding accessory. 2. Sand with the grain of the wood. 3. Reduce pressure on workpiece while sanding. 4. Keep workpiece moving while sanding on the sanding accessory.
Sanding surface clogs quickly.	1. Too much pressure against belt/disc. 2. Sanding softwood.	1. Reduce pressure on workpiece while sanding. 2. Use different stock, different sanding accessories, or accept that this will happen and plan on cleaning or replacing belts/discs frequently.
Burns on workpiece.	1. Using a sanding grit that is too fine. 2. Using too much pressure. 3. Work held still for too long.	1. Use a coarser-grit sanding accessory. 2. Reduce pressure on workpiece while sanding. 3. Do not keep workpiece in one place for too long.
Motor will not start.	4. Low voltage 5. Open circuit in motor or loose connections. 6. Blown fuse or breaker.	4. Check power source for proper voltage. 5. Inspect all lead connections on motor for loose or open connections. **(Send for Servicing.)** 6. Short circuit. **(Send for Servicing.)** 7. Improper match between tool and circuit, fuse or breaker.
Motor will not start – fuses or circuit breakers tripping or blowing.	1. Short circuit in line, cord or plug. 2. Short circuit in motor or loose connections. 3. Incorrect fuses or circuit breakers in power line.	1. Inspect cord or plug for damaged insulation and shorted wires. 2. Inspect all connections on motor for loose or shorted terminals and/or worn insulation. 3. Install correct fuses or circuit breakers or switch tool to an appropriately sized circuit.
Motor overheats.	4. Motor overloaded. 5. Extension cord too long and of insufficient gauge (weight).	4. Reduce load on motor (pressure on object being sanded.) 5. Utilize an extension cord of appropriate gauge and length or plug tool directly into outlet.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Motor stalls (resulting in blown fuses or tripped circuit).	1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Motor overload.	1. Inspect connections on motor for loose or shorted terminals or worn insulation. **(Send for Servicing.)** 2. Correct low voltage conditions (for example: improper extension cord length and/or gauge). 3. Install **CORRECT** fuses or circuit breakers or plug tool into an appropriate circuit, matched to an appropriate fuse or breaker. 4. Reduce the load on the motor.
Machine slows when operating.	1. Feed rate too great. 2. Undersized circuit or use of undersized extension cord.	1. Reduce the rate at which the workpiece is fed into the working area of the tool. 2. Ensure circuit wires or extension cords are proper gauge, or eliminate use of extension cords.
Machine vibrates excessively.	1. Incorrect motor mounting. 2. Incorrect sanding-belt tension. 3. Weak or broken tension spring. 4. Idler roller is too loose. 5. Broken/defective sanding accessories.	1. Have motor mountings inspected by service technician. 2. Adjust tension-adjustment knob. Follow belt tensioning/tracking instructions in this manual. 3. Have tension spring replaced by service technician. 4. Have service technician adjust idler roller. 5. Replace sanding belt/disc.
Workpiece frequently gets pulled out of operator's hands.	1. Not supporting the workpiece against the stop. 2. Attempting to sand (unaided) a workpiece that is too small.	1. Use the platen (backstop) or mitre gauge to support the workpiece. 2. Use another hand tool or jig to grasp or hold the workpiece.
Workpiece lifts up from the sanding disc/table.	1. Sanding on the "up" side of the wheel.	1. Sand on right side of sanding disc (as operator faces the disc).

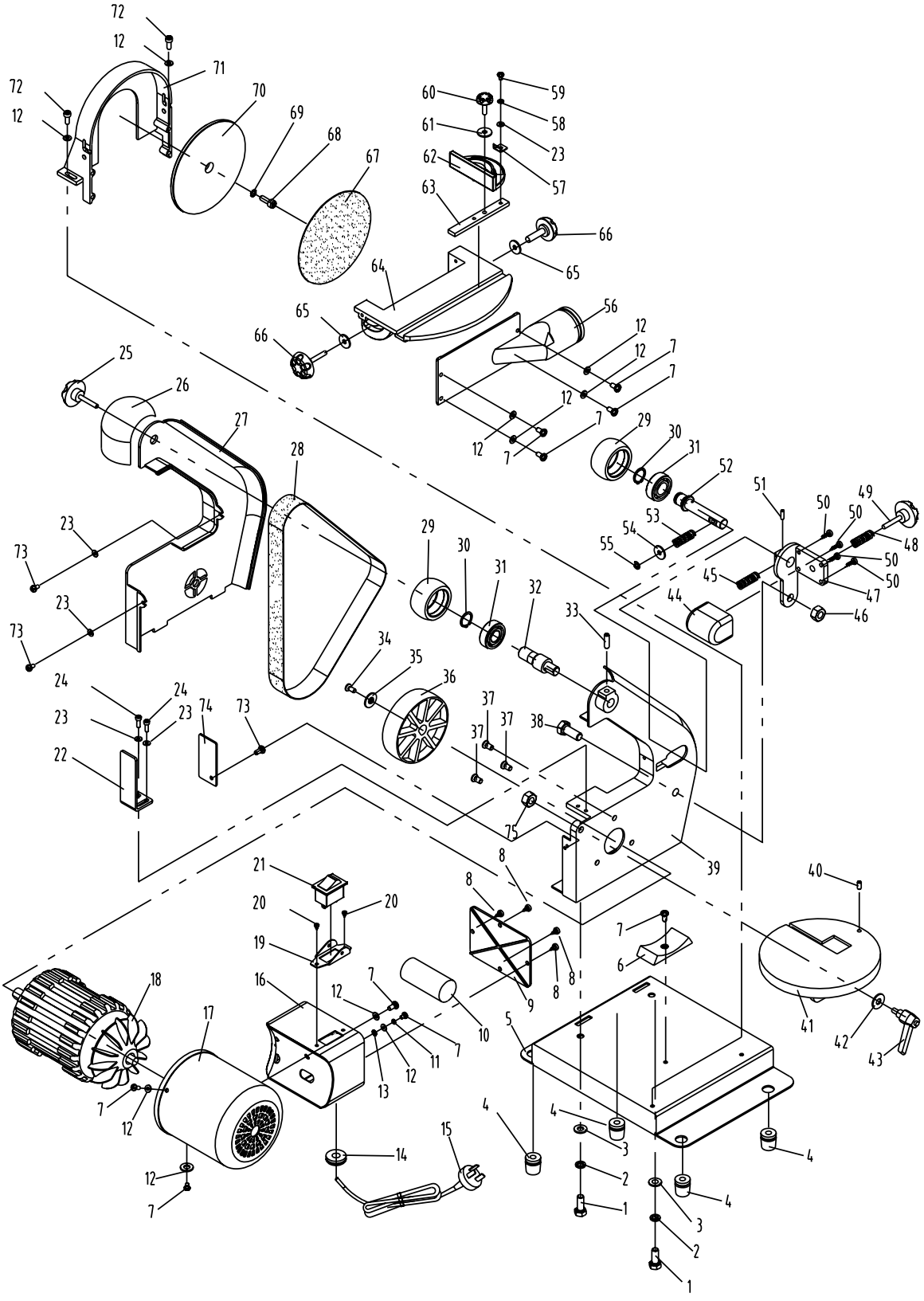
Wiring Diagram



Parts List

Key Number	Descriptions		QTY	Key Number	Descriptions		QTY
1	Hex Bolt	M8X20	2	38	Hex Bolt	M10X25	1
2	Spring Washer	D8	2	39	Sanding Belt Support		1
3	Flat Washer	D8	2	40	Hex Socket Screw	M6X20	1
4	Rubber Foot		4	41	Belt Sanding Table		1
5	Base		1	42	Large Flat Washer	D8	1
6	Rubber Motor Pad		1	43	Locking Knob Assy		1
7	Philips Screw	M5X10	9	44	Adjusting Shaft Guard		1
8	Philips Screw	ST4.2X9.5	4	45	Adjusting Spring		1
9	Switch Box Cover		1	46	Non-Metal Nut	M10	1
10	Capacitor		1	47	Adjusting Fixing Board		1
11	Spring Washer	D5	1	48	Adjusting Spring		1
12	Flat Washer	D5	10	49	Adjusting Knob		1
13	Star Washer	D5	1	50	Philips Screw	ST4.2X16	4
14	Cord Clip		1	51	Spring Column Pin	3x20	1
15	Cord & Plug		1	52	Adjusting Shaft		1
16	Switch Box		1	53	Adjusting Spring		1
17	Motor safeguard		1	54	Large Flat Washer	D5	1
18	Motor		1	55	C-Clip	3.5	1
19	Switch cover		1	56	Sanding Disc Cover		1
20	Philips Screw	ST2.9X6	2	57	Indication Arrow		1
21	Switch		1	58	Star Washer	D4	1
22	Sanding Belt Board		1	59	Philips Screw	M4X6	1
23	Flat Washer	D4	5	60	Scale Knob		1
24	Hex Socket Screw	M4X10	2	61	Large Flat Washer	D6	1
25	Cover Locking Knob		1	62	Mitre Gauge		1
26	Sanding Belt Safeguard		1	63	Rod		1
27	Sanding Belt Bracket Cover		1	64	Sanding Disc Table		1
28	Sanding Belt	1”x30”	1	65	Flat washer	D6	2
29	Idler Wheel		2	66	Table Locking Knob		2
30	Clip Spring Washer	D15	2	67	Sander Paper Disc	5"	1
31	Bearing	6202	2	68	Hex Socket Screw	M6X16	1
32	Idler Shaft		1	69	Star Washer	D6	1
33	Hex Socket Screw	M6X6	1	70	Sanding Backer Disc		1
34	Philips Screw	M5X16 LEFT	1	71	Sanding Disc Guard		1
35	Special Locking Pad		1	72	Hex Socket Screw	M5X10	2
36	Driven Wheel		1	73	Philips Screw	M4X8	3
37	Philips Screw	M6X12	3	74	Belt Guard Plate		1
				75	Hex Nut	M8	1

Parts Explosion



Notes

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 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 Road
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.

For more information:
16 Progress Road
Billerica, MA 01821

877-884-5167 / 978-528-5380
techsupport@rikontools.com
www.rikontools.com