

## 13" Bench Drill Press



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

## TABLE OF CONTENTS

Specifications.....	2
Safety Instructions .....	3 - 6
Getting To Know Your Machine .....	7
Contents of Package .....	7 - 8
Installation .....	8
Assembly .....	9 - 12
Adjustments.....	13 - 14
Maintenance .....	15
Electricals & Wiring Diagram .....	5 & 15
Troubleshooting .....	16
Accessories .....	17
Warranty .....	17
Parts Diagram .....	18
Parts List .....	19

## SPECIFICATIONS

Motor .....	1/2 HP
Motor Speed (no load).....	1,720 RPM
Volts .....	120 V
Amps, Hertz .....	7.5 A, 60 Hz
Swing .....	13"
Chuck Size .....	5/8"
Chuck Taper .....	JT3
Drilling Capacity .....	5/8"
Spindle Travel .....	3-1/8"
Spindle Taper .....	MT2
Head Rotates .....	360°
Speed Range (RPM) .....	220 - 3600
Speeds .....	16
Quill Diameter .....	2-3/16" (55mm)
Table Size .....	11-3/16" Round
Table Tilts .....	90° Left & Right
Table Rotates .....	360°
Maximum Chuck to Table .....	16-1/4"
Maximum Chuck to Base .....	24-5/8"
Column Diameter .....	2-7/8" (74mm)
Height .....	42"
Base Size .....	17-3/4" x 10-1/2"
Net Weight .....	102 lbs.

**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 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.

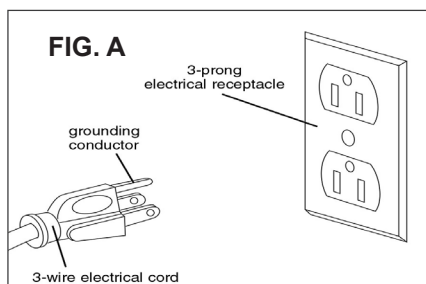
**IMPROPER ELECTRICAL CONNECTION** of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. **DO NOT** connect the equipment grounding conductor to a live terminal if repair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

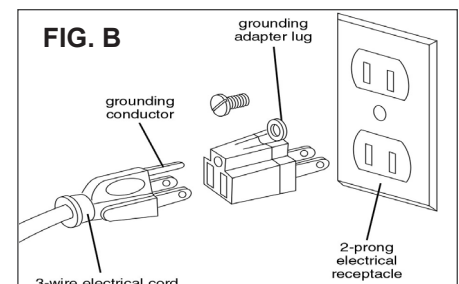
### MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)

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 DRILL PRESSES

This machine is intended for the drilling of wood, composite materials, plastics, ferrous and non-ferrous metals. The permissible workpiece dimensions must be observed (see Technical Specification). 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 drill press 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 the Drill Press until it is assembled and you have read all of the instructions.
2. Do not operate the Drill Press unless you are familiar with its safe operation. If you are not familiar with the operation of a Drill Press seek advice from your supervisor, instructor or other qualified individual.
3. If you are using a bench top Drill Press, it must be securely fastened to a stand or bench.
4. If you are operating a floor Drill Press it must be securely fastened to the floor.
5. Always clear the table and work area before turning on the Drill Press.
6. Always use drill bits, cutting tools and accessories with a 1/2" shank or less.
7. Never place hands near the drill bit, cutting tool or accessory while operating the Drill Press.
8. Always wear approved, safety eye wear and hearing protection while operating the Drill Press.
9. Never wear loose clothing, gloves or ties while operating the Drill Press. Tie loose hair back.
10. Always wear a dust mask and use adequate dust collection and proper ventilation.
11. Always have a firm footing while operating the Drill Press.
12. Always keep the work surface and work areas clear of debris.
13. Never attempt to do set-up work, assembly or layout work on the Drill Press while it is in operation.
14. Always lock all table, column and head locks before turning on the Drill Press.
15. Never start the Drill Press with the drill bit, cutting tool or accessory in contact with the work piece.
16. Never operate the Drill Press with a damaged drill bit, cutting tool or accessory.
17. Always check that the drill bit, cutting tool or accessory is held tight in the chuck.
18. Never operate the Drill Press with the chuck key in the chuck.
19. Always adjust the depth stop to avoid drilling into the table surface.
20. Never drill material unless it is properly supported. Non flat work pieces require additional support.
21. Always clamp the work piece to the table.
22. Always support large work pieces at the same height as the table.
23. Never remove the work piece or clear the table until the Drill Press comes to a complete stop.
24. Never operate the Drill Press with missing, damaged, worn, loose or defective parts.
25. Never adjust, change speeds or perform maintenance on the Drill Press while it is operating.
26. Always clean the work surface and work area when finished operating the Drill Press.
27. Always disconnect the power when adjusting or performing maintenance on the Drill Press.
28. Always disconnect the power when finished using the Drill Press to prevent accidental operation.

## SAVE THESE INSTRUCTIONS. Refer to them often.

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

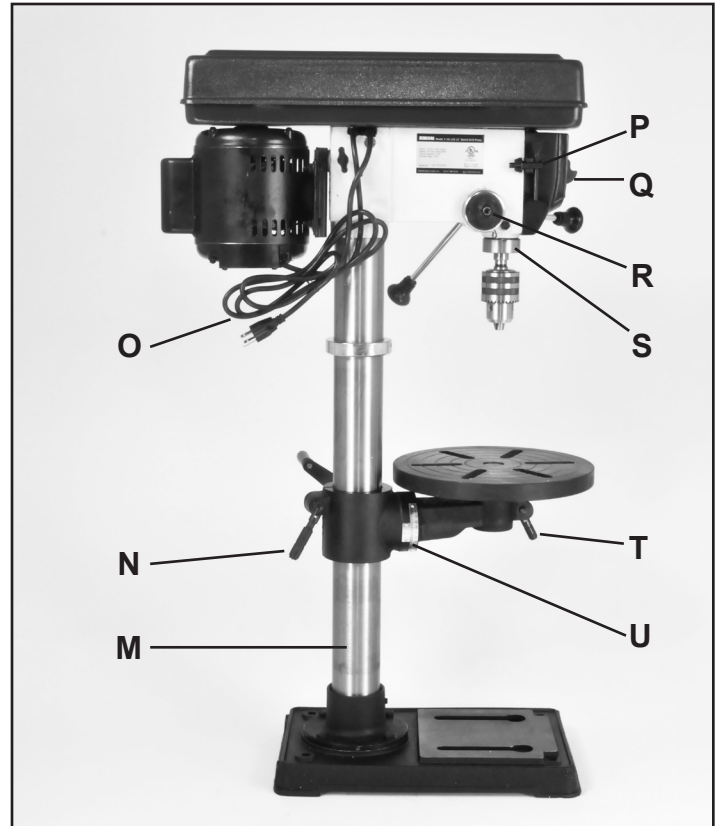
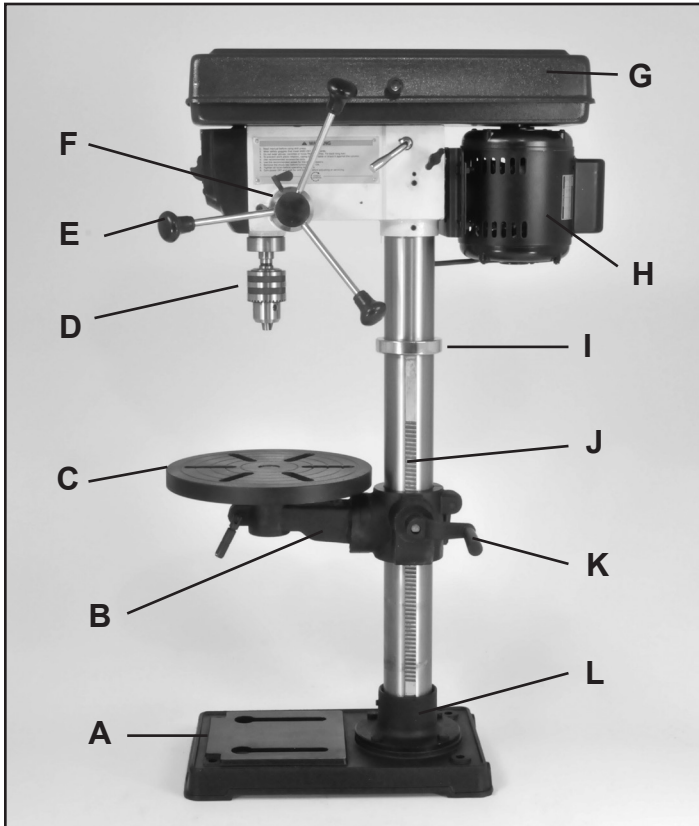
### California Proposition 65 Warning



**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 Base  
 B Table Support  
 C Table  
 D Chuck  
 E Feed Handles  
 F Depth Stop & Scale  
 G Belt Cover

H Motor  
 I Column Collar  
 J Column Rack  
 K Crank Handle  
 L Column Support  
 M Column  
 N Lock Handle

O Power Cord  
 P Chuck Key Holder  
 Q On/Off Safety Switch  
 R Quill Return Spring  
 S Quill & Spindle  
 T Table Lock Handle  
 U Table Angle Scale & Lock Nut

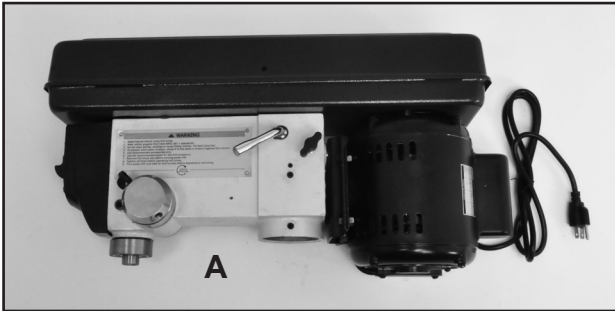
## CONTENTS OF PACKAGE

Model #30-120 13" Benchtop Drill Press is shipped complete in one box.

### Unpacking and Clean-up

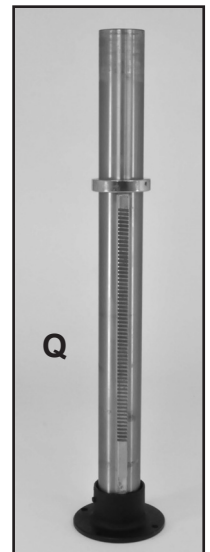
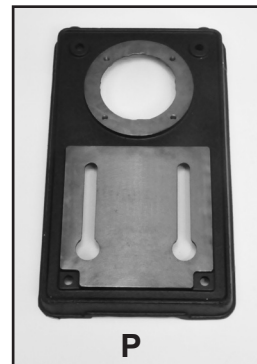
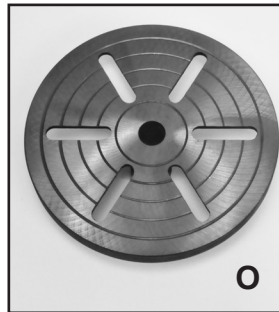
1. Carefully remove all contents from the shipping carton. Compare the contents with the list of contents to make sure that all of the items are accounted for, before discarding any packing material. Place parts on a protected surface for easy identification and assembly. If any parts are missing or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

## CONTENTS OF PACKAGE



### LIST OF LOOSE PARTS

- A Drill Press Head Assembly
- B Column & Table Support Arm
- C Worm Elevation Gear
- D Table Raising Handle
- E Column Table Support Lever Handle
- F Table Clamp Lever Handle
- G Chuck Key
- H 5/8" Keyed Chuck
- I Chuck Arbor JT3 - MT2
- J Handle & Screw for Head Cover
- K Column Mounting Screws (4)
- L Hex Wrenches - 3mm, 4mm
- M Drift Key
- N Feed Handles (3)
- O Table
- P Base
- Q Column Assembly
- R Manual & Warranty Card (not shown)



### TOOLS NEEDED FOR ASSEMBLY

- Phillips Screwdriver
- 10mm, 16mm or Adjustable Wrench
- Rubber Mallet or Hammer & Block of Wood

## INSTALLATION

### MOVING & INSTALLING THE DRILL PRESS

**CAUTION** When moving the assembled Drill Press, at least two people are recommended. The machine is very heavy, and top heavy. Tilt the drill press backwards so that one person can hold the head section. Then the base can be lifted by the second person, and the machine moved to the desired new location. **DO NOT** move or carry the Drill Press with the work table, chuck or operating handles, as this may damage the machine.

1. Position the machine on a solid, level bench that is located in an area that has ample space in front and to both sides of the drill press for the moving of lumber and projects to be drilled.

2. Align the machine so that during use, any kickback 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.

3. If possible, secure the machine to the bench with lag screws or other fasteners (not supplied). This will ensure the stability of the machine and reduce any possible vibration during use. If this is not possible, the base can be bolted to a larger piece of plywood to help stabilize the machine. **DO NOT** use a mobile base with this machine.

4. For best power and safety, the Drill Press should be directly plugged into a dedicated grounded electrical outlet that is within the supplied cord length of the machine. The use of an extension cord is not recommended.



# ASSEMBLY

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

## BASE AND COLUMN ASSEMBLY

1. Place the base (A-Fig. 1) on a level floor where the machine will be used.
2. Attach the column (B-Fig.1) to the base (A-Fig. 1) using four M8x20 hex bolts. Tighten all four bolts with a 16mm or adjustable wrench.
3. Using an allen wrench (C-Fig. 2) remove the column collar (D-Fig. 2) as shown.
4. Insert the worm elevation gear (E-Fig. 3) into the table support bracket (F-Fig. 3) as shown.
5. Place rack (G-Fig. 4) inside the table support bracket (F-Fig. 4) lining up the teeth as shown.
6. Slide the table support and rack assembly over the column and replace the column collar.

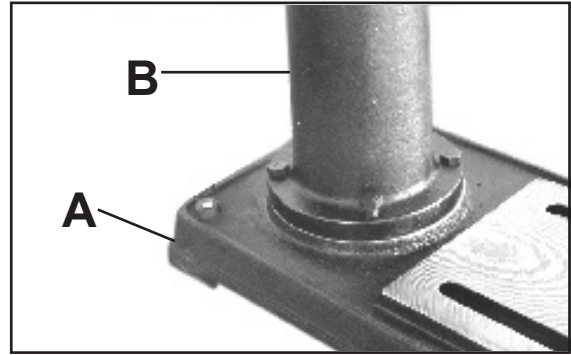


Figure 1

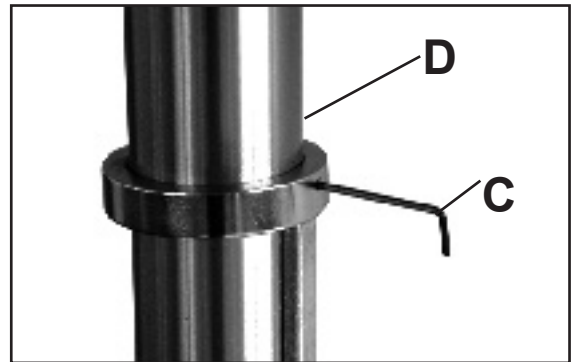


Figure 2

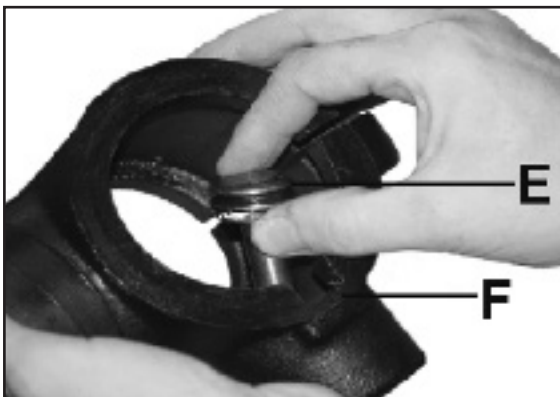


Figure 3

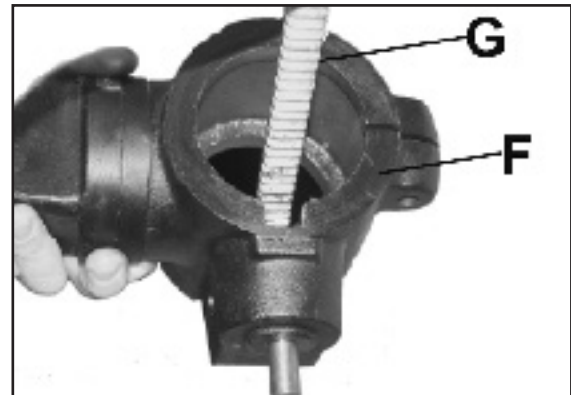


Figure 4

## HEAD ASSEMBLY

**NOTE:** Assistance is needed for this next step.

1. Place the drill press head (A-Fig. 5) onto the column (B-Fig. 5) as far as it will go.

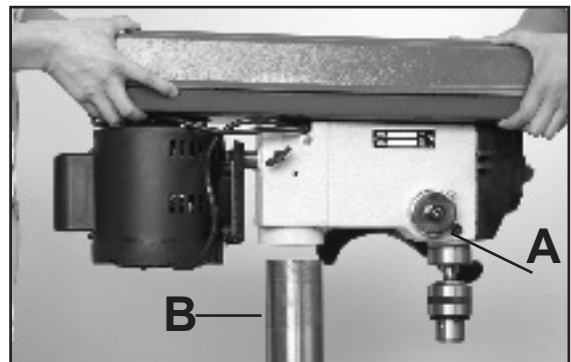


Figure 5

CONTINUED ON NEXT PAGE

# ASSEMBLY

## HEAD ASSEMBLY - CONTINUED

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

2. Align the drill press head (A-Fig. 6) with the base of the drill press (B-Fig. 6).
3. Tighten the drill press head (A-Fig. 7) to the column (B-Fig. 7) by tightening the two set screws on the right side of the head as shown.
4. Attach the 3 feed handles into the threaded holes in the handle hub. Fig. 8
5. Install the small, belt cover Handle Knob onto the right side of the top lid (A-Fig. 9). Open the belt cover and insert the Phillips head screw through the hole in the lid from the inside. Thread the handle on the outside of the belt cover and tighten it in place with a screw-driver.
6. Install the idler pulley and drive belts. Simply slide the pivot post of the idler pulley into the corresponding hole in the drill press head as shown. The small drive belt (M24) is mounted to the *spindle* pulley and the large drive belt (M25) is mounted to the *motor* pulley. Fig. 9.

**NOTE:** Setting the Spindle Speed and Tension of the drive belts is covered on pages 13 and 14.

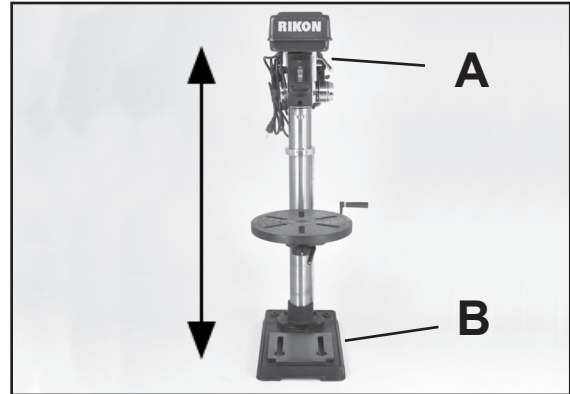


Figure 6

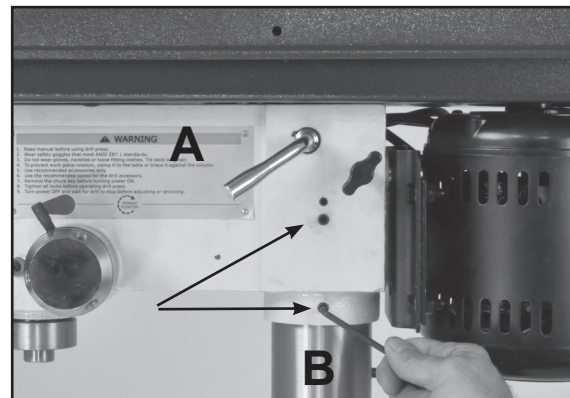


Figure 7

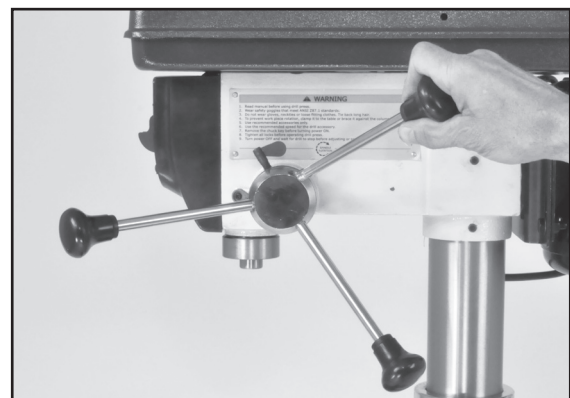


Figure 8

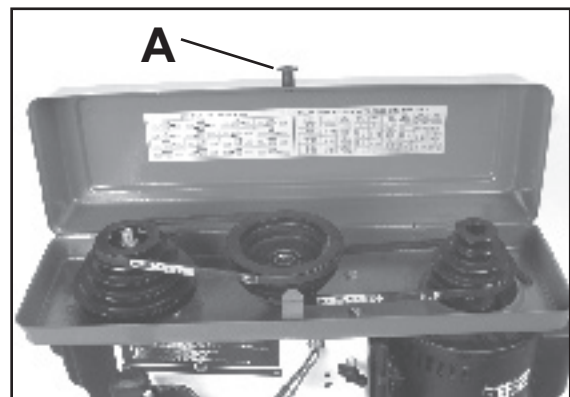


Figure 9

# ASSEMBLY

## INSTALLING & REMOVING THE CHUCK AND ARBOR

**IMPORTANT!** It is important that the tapered hole in the chuck, tapered hole in the spindle and both tapered ends of the arbor are free of any grease, oil, lacquer or rust protection.

These tapered surfaces must be absolutely clean for a precision fitting of the parts, so slipping of the chuck during use does not occur unless there is extreme rotational pressure during use. This is a safety feature of this type of friction fit joint.

### INSTALLING THE CHUCK AND ARBOR

1. Open the chuck jaws as wide as possible to prevent any damage. (Fig. 10)
2. Insert the arbor (A-Fig. 11) into the chuck (B-Fig. 11) as shown. Make sure that the arbor end and receiving tapered hole in the chuck body rear are clean of grease, oil, rust protection and any burrs or scratches that disrupt the taper surface.
3. Carefully insert the chuck and arbor assembly into the spindle, making sure to align the flat part of the arbor with the spindle. (Fig. 12)
4. Using a mallet or wood and hammer, drive the chuck and arbor assembly into the spindle. This will properly seat the chuck assembly on the spindle. (Fig. 13)

**CAUTION** NEVER HIT THE CHUCK ASSEMBLY WITH A METAL HAMMER. This could damage the chuck assembly or spindle.

5. Close the chuck jaws with the chuck key provided.

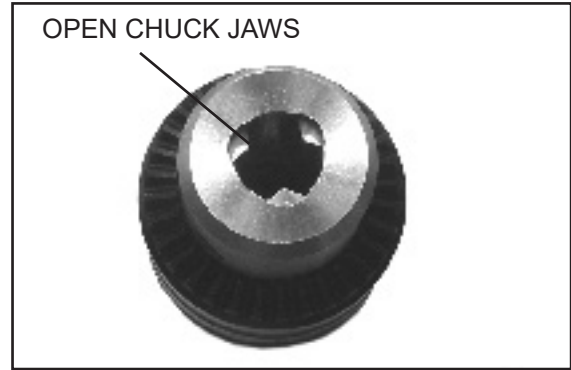


Figure 10

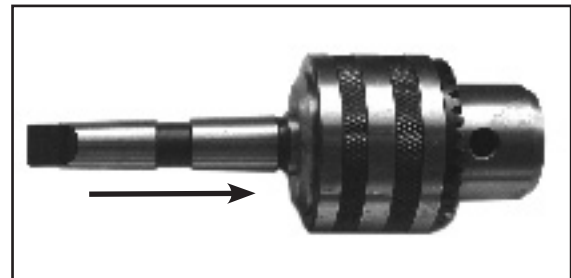


Figure 11

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

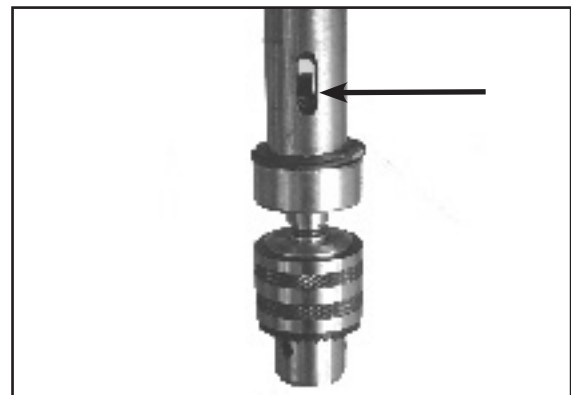


Figure 12

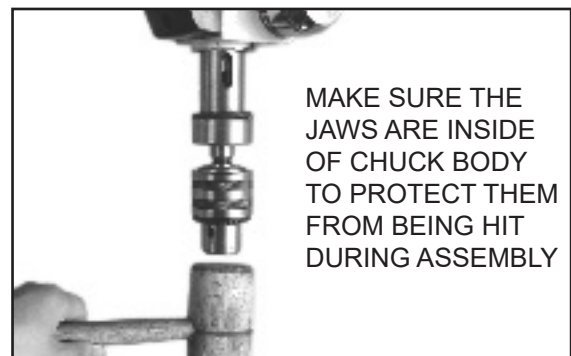


Figure 13

# ASSEMBLY

## REMOVING THE CHUCK

1. Open the chuck jaws as wide as possible to prevent damage.
2. Lower the spindle until the slot in the spindle is exposed. (Fig. 14)
3. Position the table approximately 1/2" below the extended chuck.
4. Turn the chuck until a through hole is exposed in the spindle.
5. Insert the Key-drift into the slot. (Fig. 15).
6. Gently tap the key-drift with a mallet to release the chuck.

**NOTE:** To avoid damage to the chuck, make sure to place a hand below the chuck to catch it as it is released from the spindle.



Figure 14



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

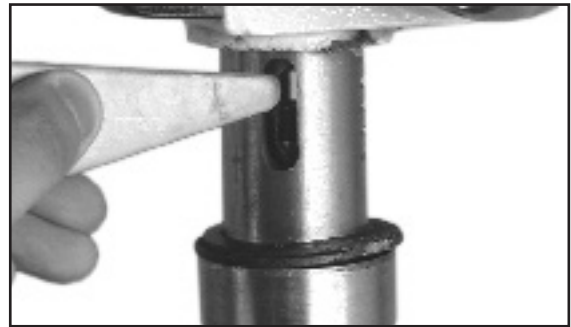


Figure 15

## INSTALLING THE TABLE

1. Insert the table post (A-Fig. 16) into the table support bracket (B-Fig. 16) as shown.
2. Tighten the locking lever (A-Fig. 17) onto the table support bracket (B-Fig. 17) and install the table raising/lowering handle (C-Fig. 17).
3. Check the column & table support arm to make sure the scale is on zero position (A-Fig. 16). If necessary, loosen the hex bolt (B-Fig. 16) and also adjust the hex socket screw (C-Fig. 16) to level the table 90 degree to the spindle.

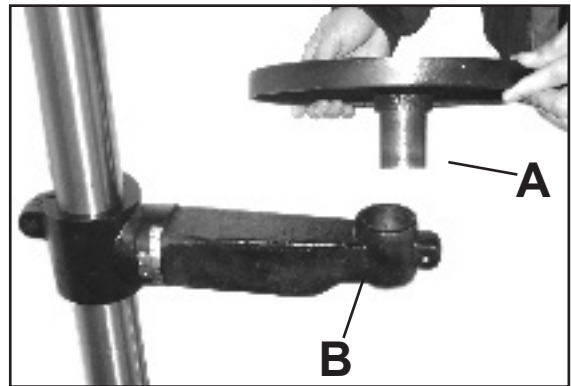


Figure 16

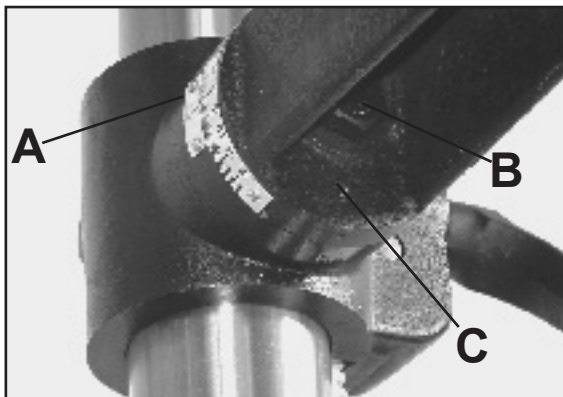


Figure 18

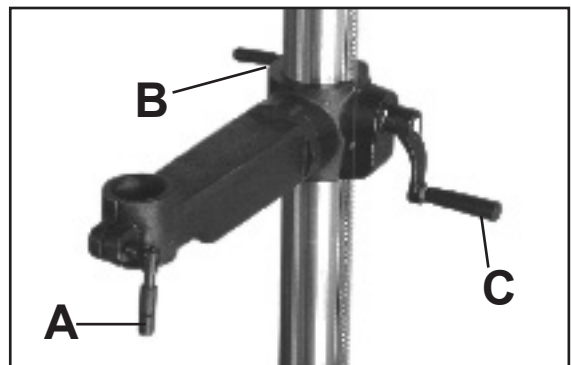


Figure 17

# ADJUSTMENTS

## TABLE ADJUSTMENTS

### RAISING AND LOWERING THE TABLE

1. Loosen the column lock (A-Fig. 19) on the table support bracket (B-Fig. 19).
2. Turn the crank to raise or lower the table to the desired height.
3. Tighten the column lock (A-Fig. 19).

**NOTE:** The table can rotate 360° by loosening the table lock handle and turning to the desired position. (Fig. 20)

### TILTING THE TABLE

1. Loosen the nut below the table support arm. (Fig. 18). This requires a 24mm socket, adjustable, or special wrench (see page 17).
2. Tilt the table to the desired angle. (Fig. 21).
3. A tilt scale and pointer are provided on the bracket to indicate the angle. (Fig. 18).
4. Tighten nut below the table support arm to secure the table in the angled position.

### CHANGING SPINDLE SPEEDS

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

1. Turn off and disconnect the power to the Drill Press.
2. Open the top belt cover.
3. Release the tension on the belt by loosening the belt tension lock (A-Fig. 22) and pull the tension handle backward on the motor (B-Fig. 22).
4. Choose the desired speed by referring to the speed selection chart that is applied inside of the top belt cover. Also, see chart on page 14.

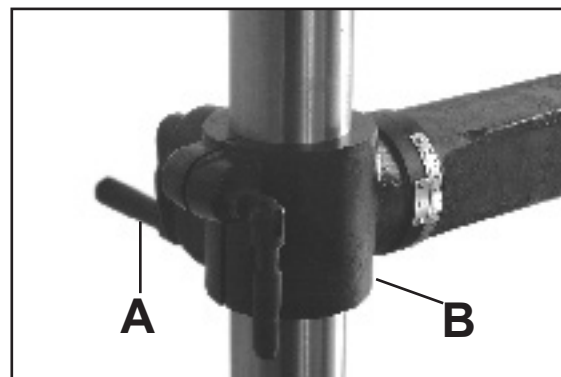


Figure 19

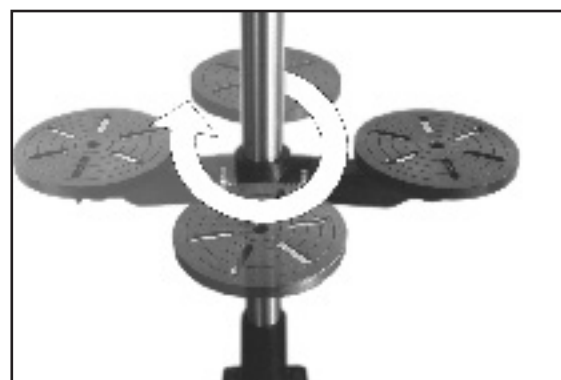


Figure 20

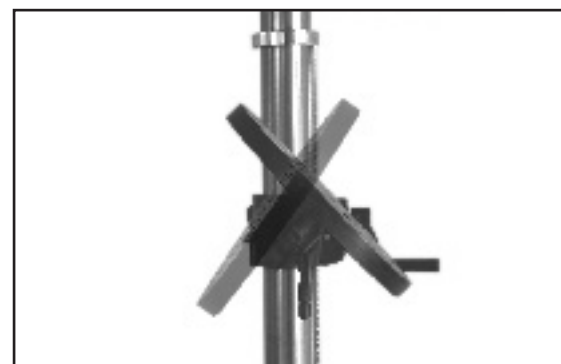


Figure 21



Figure 22

CONTINUED ON NEXT PAGE

# ADJUSTMENTS

## CHANGING SPINDLE SPEEDS - continued

- Place the belt on the pulleys in relation to the speed chosen on the speed selection chart starting with the motor pulley first. (Fig. 23)
- Push the belt tension handle (B-Fig. 24) back ward on the motor until there is approximately 1/2" deflection in the belt.
- Tighten the belt tension lock handle (A-Fig. 24).
- Close the top belt cover.
- Reconnect the Drill Press to the power.

220	300	430	480
590	650	720	850
900	950	1600	1900
2000	2500	2900	3600

Figure 23

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

## CHANGING THE BELTS

To change a worn belt, follow the same basic steps for Changing Spindle Speeds:

- Release the belt tension (steps 1-3)
- Remove the old belt from the pulleys
- Install the new belt onto the pulleys
- Reset the belt tension (steps 5-9)



Figure 24

## SETTING THE SPINDLE LOCK

- Loosen the depth stop collar lock (A-Fig. 25) as shown.
- Lower the spindle to the desired depth.
- Turn the depth stop collar clockwise until the collar stops (B-Fig. 25).
- Tighten the depth stop collar lock.

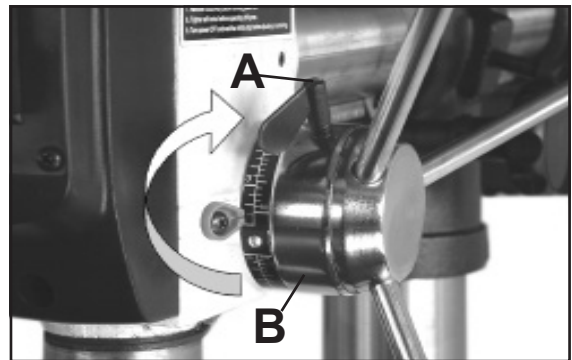


Figure 25

**NOTE:** Figure 26 shows the spindle in the locked position.

## SETTING THE DRILL DEPTH

- With the spindle in the up position, loosen the depth stop collar lock (A-Fig. 25) as shown.
- Turn the depth stop collar clockwise until the pointer reads the desired drill depth on the scale (B-Fig. 25).
- Tighten the depth stop collar lock.

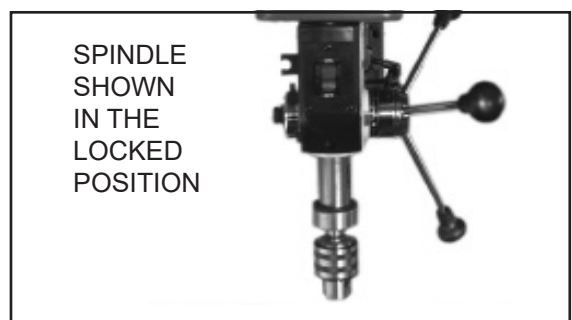


Figure 26

## MAINTENANCE

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

1. Before each use:

- Check the power cord and plug for any wear or damage.
- Check for any loose screws, hardware or parts.
- Check the area to make sure it is clear of any misplaced tools, lumber, cleaning supplies, etc. that could hamper the safe operation of the machine.

2. To avoid a build-up of wood dust, regularly clean all parts of the machine using a soft cloth, brush or compressed air. A general cleaning should be done after every use to avoid future problems and ensure the machine is in ready condition for its next use.

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

3. Keep the machined surfaces of the drill press table and base free of resin and rust. Clean them regularly with a non-flammable solvent, then coat with a light film of dry lubricant spray or wax.

4. Lubricate the table bracket and locking lever bolts to keep them operating smoothly.

5. Clean the column on a regular basis to prevent the build-up of dust, drilling residue and rust. Treat the posts with a dry lubricant spray or a light coating of wax. Do not use ordinary oil which will collect dust and hamper the movement of parts along the column.

6. Periodically, lower the quill assembly and apply a light coating of machine oil to the quill and spindle surfaces. Raise and lower the quill a few times to distribute the oil on all of the internal surfaces.

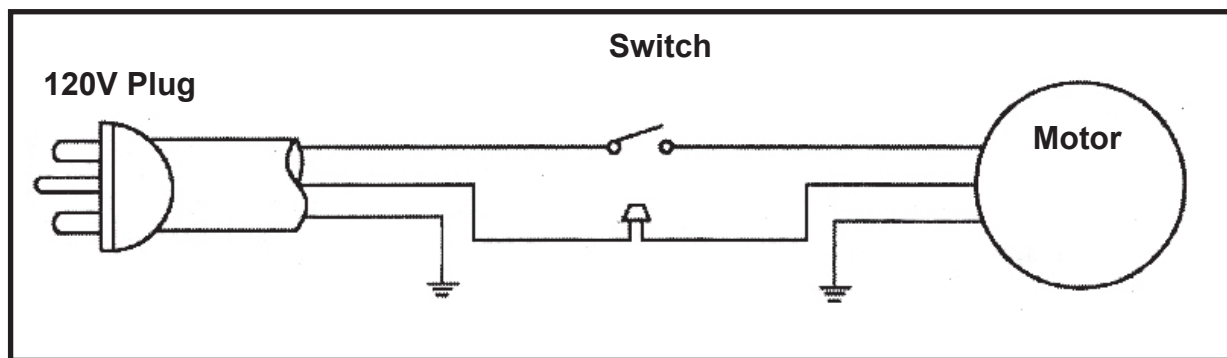
7. Apply #2 tube grease to the worm gears in the table elevation mechanism and rack to keep them operating smoothly.

8. The ball bearings in the spindle and pulley assemblies are lifetime lubricated, sealed, and do not need any further care.

9. Keep the drive belt and pulley surfaces free of oil and grease. Periodically, check the drive belt for wear and replace if necessary.

## WIRING DIAGRAM

**⚠ WARNING:** This machine must be grounded. Replacement of the power supply cable should only be done by a qualified electrician. See page 5 for additional electrical information.



DO NOT attempt to repair or maintain the electrical components of the motor.  
Contact a qualified service technician for this type of maintenance.

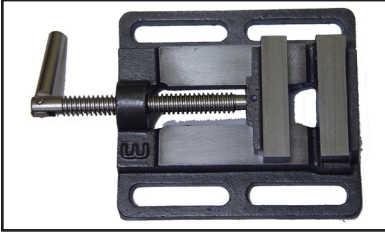


## TROUBLESHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Noisy Operation	<ol style="list-style-type: none"> <li>1. Incorrect belt tension.</li> <li>2. Dry Spindle.</li> <li>3. Loose spindle pulley.</li> <li>4. Loose motor pulley.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tension.</li> <li>2. Lubricate spindle.</li> <li>3. Checking tightness of retaining nut on pulley and tighten if necessary.</li> <li>4. Tighten set screws in pulleys.</li> </ol>
Drill Bit Burns Material	<ol style="list-style-type: none"> <li>1. Incorrect speed.</li> <li>2. Chips not coming out of hole.</li> <li>3. Dull drill bit.</li> <li>4. Feeding too slow.</li> <li>5. Not Lubricated</li> </ol>	<ol style="list-style-type: none"> <li>1. Change speed.</li> <li>2. Retract drill bit frequently to clear chips.</li> <li>3. Resharpener drill bit.</li> <li>4. Increase the speed.</li> <li>5. Lubricate drill bit.</li> </ol>
Drill bit leads off, hole not round.	<ol style="list-style-type: none"> <li>1. Hard grain in wood or lengths of cutting lips and/ or angles not equal.</li> <li>2. Bent drill bit.</li> </ol>	<ol style="list-style-type: none"> <li>1. Resharpener drill bit correctly.</li> <li>2. Replace drill bit.</li> </ol>
Wood splinters on underside of workpiece.	<ol style="list-style-type: none"> <li>1. No "back up material" under workpiece.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use "back-up material"</li> </ol>
Wood piece pulled loose from hands.	<ol style="list-style-type: none"> <li>1. Not supported or clamped properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Support workpiece or clamp it.</li> </ol>
Drill bit binds in workpiece.	<ol style="list-style-type: none"> <li>1. Workpiece pinching drill bit or excessive feed pressure.</li> <li>2. Improper belt tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Support workpiece or clamp it.</li> <li>2. Adjust belt tension.</li> </ol>
Excessive drill bit runout or wobble.	<ol style="list-style-type: none"> <li>1. Bent drill bit.</li> <li>2. Worn spindle bearings.</li> <li>3. Drill bit not properly installed in chuck.</li> <li>4. Chuck not properly installed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a straight drill bit.</li> <li>2. Replace bearings.</li> <li>3. Install drill bit properly.</li> <li>4. Install chuck properly.</li> </ol>
Quill Returns too slow or too fast.	<ol style="list-style-type: none"> <li>1. Spring has improper tension.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust spring tension.</li> </ol>
Chuck will not stay attached to spindle, it falls off when trying to install it.	<ol style="list-style-type: none"> <li>1. Dirty, grease, or oil on the tapered inside surface of chuck or on the spindle's tapered surface.</li> </ol>	<ol style="list-style-type: none"> <li>1. Using a household detergent, clean the tapered surface of the chuck and spindle to remove all dirt, grease and oil.</li> </ol>



## ACCESSORIES



	Approx. Sizes	JAWS L x W	Jaws Open
<b>93-010</b>	<b>3" Vise</b>	3" x 13/16"	3-1/4"
<b>93-020</b>	<b>4" Vise</b>	4" x 15/16"	4-1/4"
<b>93-030</b>	<b>5" Vise</b>	5" x 7/8"	5"
<b>93-040</b>	<b>6" Vise</b>	6" x 1"	6"

All metal construction with slots for mounting on drill press tables. Large toggle handles for fast adjusting of the jaws. Machined base and jaws to maintain table flatness and solid work support.



**P30-217-22D Special 24mm Wrench** for use on table tilt hex bolt.



### 29-202 Mortising Attachment Kit

The Mortising Attachment converts your Drill Press in to an accurate mortising machine. It is ideal for drilling square holes for mortise & tenon joints that are commonly used in furniture, cabinets, sash, pattern shops and other woodworking plants.

The Mortising Attachment Kit can be installed on most any drill press with a collar size of: 40mm, 48mm, 50.8mm, 55mm, 60mm, 66mm or 75mm. Kit includes yoke, collar adapters, fence, hold downs, 4 chisels & bits (1/4", 5/16", 3/8" 1/2") and plastic storage case.

# 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.

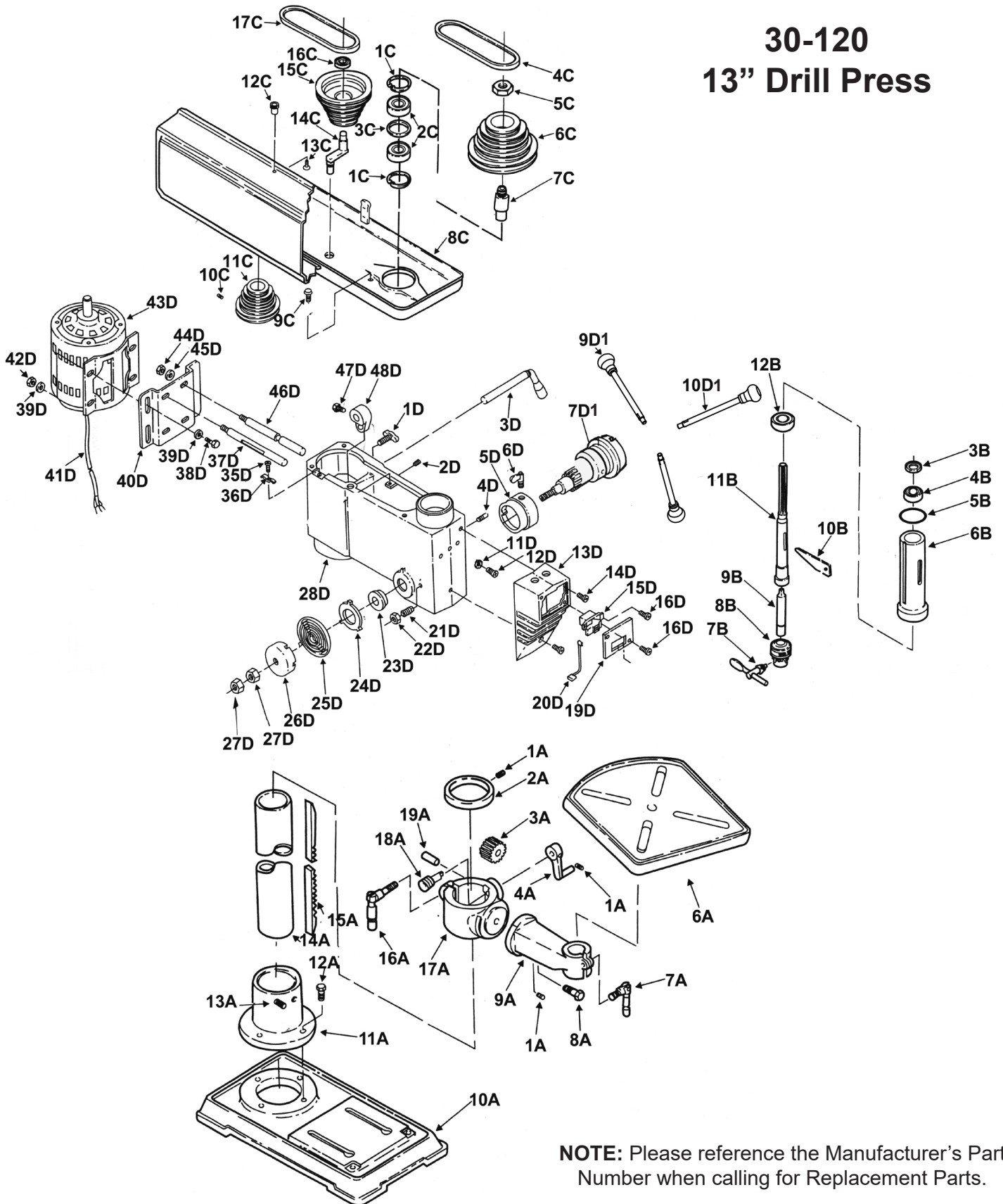
The Seller reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

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 877-884-6167 or email [warranty@rikontools.com](mailto:warranty@rikontools.com)

# PARTS DIAGRAM

## 30-120 13" Drill Press



**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	PART NO.	KEY NO.	DESCRIPTION	PART NO.
1A	Screw-Hex Soc Set M6	P30-120-1A	14C	Pivot-Idler	P30-120-14C
2A	Collar-Rack	P30-120-2A	15C	Pulley-Center	P30-120-15C
3A	Gear-Helical	P30-120-3A	16C	Bearing-Ball 15mm	P30-120-16C
4A	Crank	P30-120-4A	1D	Knob-Motor Adjusting	P30-120-1D
6A	Table	P30-120-6A	2D	Screw-Socket Set M10	P30-120-2D
7A	Clamp-Table	P30-120-7A	3D	Handle-Belt Tension	P30-120-3D
8A	Screw-Hex Head M16x20-35	P30-120-8A	4D	Pin-Stop	P30-120-4D
9A	Arm-Table w/Scale	P30-120-9A	5D	Ring-Depth Stop w/Scale	P30-120-5D
10A	Base	P30-120-10A	6D	Lock-Depth Screw	P30-120-6D
11A	Support Column	P30-120-11A	7D1	Hub	P30-120-7D1
12A	Screw-Hex HD M10x1.5-40	P30-120-12A	9D1	Knob on Feed Rod	P30-120-9D1
13A	Screw-Hex Soc Set M10	P30-120-13A	10D1	Feed Rod	P30-120-10D1
14A	Tube Column	P30-120-14A	11D	Lock Washer Ext.M5	P30-120-11D
15A	Rack	P30-120-15A	12D	Screw-Pan HD M5	P30-120-12D
16A	Clamp-Column	P30-120-16A	13D	Box Switch	P30-120-13D
17A	Support-Table w/Indicator	P30-120-17A	14D	Screw-Pan HD M5	P30-120-14D
18A	Worm-Elevation Gear	P30-120-18A	15D	Switch-Locking	P30-120-15D
19A	Pin-Gear	P30-120-19A	16D	Screw-Pan HD M4.2	P30-120-16D
3B	Ring-Retaining	P30-120-3B	19D	Cover-Switch Plate	P30-120-19D
4B	Bearing-Ball 17mm	P30-120-4B	20D	Lead Assembly 3	P30-120-20D
5B	Washer-Rubber	P30-120-5B	21D	Screw-Set Special 10	P30-120-21D
6B	Tube-Quill	P30-120-6B	22D	Nut-Hex M10x1.5	P30-120-22D
7B	Key-Chuck	P30-120-7B	23D	Seat-Spring	P30-120-23D
8B	Chuck 5/8"	P30-120-8B	24D	Retainer-Spring	P30-120-24D
9B	Arbor JT3 - MT2	P30-120-9B	25D	Spring-Torsion	P30-120-25D
10B	Drift Key	P30-120-10B	26D	Cap-Spring	P30-120-26D
11B	Spindle	P30-120-11B	27D	Nut-Hex M12x1.5-8	P30-120-27D
12B	Bearing-Ball	P30-120-12B	28D	Head w/Pointer and Trim	P30-120-28D
1C	Ring- Retaining	P30-120-1C	36D	Clamp-Cord	P30-120-36D
2C	Bearing-Ball 25mm	P30-120-2C	37D	Support-Motor Bracket	P30-120-37D
3C	Spacer-Bearing	P30-120-3C	38D	Screw-Hex HD M8	P30-120-38D
4C	V-Belt M24	P30-120-4C	39D	Washer 8x16x1.6	P30-120-39D
5C	Nut-Pulley	P30-120-5C	40D	Mount-Motor	P30-120-40D
6C	Pulley-Spindle	P30-120-6C	41D	Cord-Motor	P30-120-41D
7C	Insert-Pulley	P30-120-7C	42D	Nut-Hex M8x1.25	P30-120-42D
8C	Guard-Pulley w/Labels	P30-120-8C	43D	Motor	P30-120-43D
9C	Screw-RD HD Washer	P30-120-9C	44D	Nut-Hex M12x1.75	P30-120-44D
10C	Screw-Set M10x1.5-12	P30-120-10C	45D	Lock Washer 1/2	P30-120-45D
11C	Pulley-Motor	P30-120-11C	46D	Support-Motor Bracket	P30-120-46D
12C	Knob	P30-120-12C	47D	Screw Hex HD M8	P30-120-47D
13C	Screw-Pan HD M5x0.8-12	P30-120-13C	48D	Lever-Adjusting	P30-120-48D

**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.



For more information:  
16 Progress Road  
Billerica, MA 01821

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

