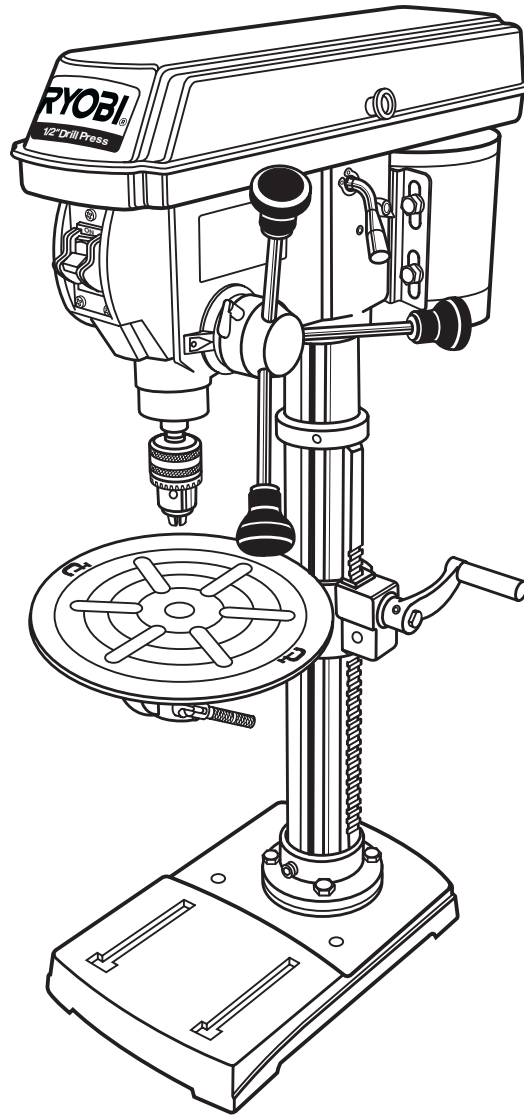


# RYOBI®

## OPERATOR'S MANUAL 12 in. (305 mm) DRILL PRESS MODEL DP120



### THANK YOU FOR BUYING A RYOBI BENCHTOP DRILL PRESS.

Your new Drill Press has been engineered and manufactured to Ryobi's high standards for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.



**CAUTION:** Carefully read through this entire operator's manual before using your new machine.

Pay close attention to the Rules for Safe Operation, Warnings, and Cautions. If you use your machine properly and only for what it is intended, you will enjoy years of safe, reliable service.

Please fill out and return the Warranty Registration Card so we can be of future service to you.

Thank you again for buying Ryobi tools.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

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## PRODUCT SPECIFICATIONS

Chuck	1/2 in. (13 mm)	Spindle Travel	3-1/4 in. (82 mm)
No Load Speed	280 - 3000 RPM	Input	120V AC, 60Hz, 5 amps
Swing	12 in. (305 mm)	Net Weight	84 lbs (38 kg)



**Look for this symbol to point out important safety precautions. It means attention!!! Your safety is involved.**

### SAFETY AND INTERNATIONAL SYMBOLS

This operator's manual describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating and maintenance, and repair information.



#### MEANING

Do not expose to rain or use in damp locations

### **WARNING:**



The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always wear eye protection which is marked to comply with ANSI Z87.1.

# RULES FOR SAFE OPERATION

Safe operation of this power tool requires that you read and understand this operator's manual and all labels affixed to the tool. Safety is a combination of common sense, staying alert, and knowing how your tool works.

## READ ALL INSTRUCTIONS

- **KNOW YOUR POWER TOOL.** Safe operation of this power tool requires that you read and understand this operator's manual and all labels affixed to the tool. Learn its applications and limitations as well as the potential hazards.
- **GUARD AGAINST ELECTRICAL SHOCK** by preventing body contact with grounded surfaces such as pipes, radiators, ranges, refrigerator enclosures.
- **KEEP GUARDS IN PLACE** and in good working order.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Get in the habit - before turning on tool - that hex keys and adjusting wrenches are removed from tool.
- **KEEP THE WORK AREA CLEAN.** Cluttered work areas and work benches invite accidents. **DO NOT** leave tools or pieces of wood on the machine while it is in operation.
- **DO NOT USE IN DANGEROUS ENVIRONMENTS.** Do not use power tools near gasoline or other flammable liquids, in damp or wet locations, or expose them to rain. Keep the work area well lighted.
- **KEEP CHILDREN AND VISITORS AWAY.** All visitors should wear safety glasses and be kept a safe distance from work area. Do not let visitors contact tool or extension cord while operating.
- **MAKE WORKSHOP CHILDPROOF** with padlocks and master switches or by removing starter keys.
- **DO NOT FORCE THE TOOL** it will do the job better and safer at the rate for which it was designed.
- **USE THE RIGHT TOOL FOR THE JOB.** Do not force the tool or attachment to do a job for which it was not designed for. Use it only the way it was intended.
- **USE THE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. Use only a cord heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. A wire gage size (A.W.G.) of at least **16** is recommended for an extension cord 25 feet or less in length. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
- **DRESS PROPERLY.** Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry that could get caught and draw you into moving parts. Non-slip footwear is recommended. Wear protective covering over long hair.
- **ALWAYS WEAR SAFETY GLASSES WITH SIDE SHIELDS.** Everyday eyeglasses have only impact resistant lenses; they are **not** safety glasses.
- **PROTECT YOUR LUNGS.** Wear a face or dust mask if the operation is dusty.
- **PROTECT YOUR HEARING.** Wear hearing protection during extended periods of operation.
- **SECURE WORK.** Use clamps or a vise to hold the work when practical. It's safer than using your hand and frees both hands to operate the tool.
- **DO NOT OVERREACH.** Keep proper footing and balance at all times.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories.
- **DISCONNECT ALL TOOLS.** When not in use, before servicing, or when changing attachments, all tools should be disconnected.
- **AVOID ACCIDENTAL STARTING.** Be sure switch is off when plugging in any tool.
- **USE RECOMMENDED ACCESSORIES.** Consult this operator's manual for recommended accessories. The use of improper accessories may cause risk of injury.
- **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the bit is unintentionally contacted.
- **CHECK DAMAGED PARTS.** Before using the tool, a guard or other part that is damaged should be carefully checked to determine 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 operation. A guard or other part that is damaged must be properly repaired or replaced by an authorized service center to avoid risk of personal injury.
- **NEVER LEAVE TOOL RUNNING UNATTENDED, TURN THE POWER OFF.** Do not leave tool until it comes to a complete stop.
- **DO NOT ABUSE CORD.** Never yank the cord to disconnect it from the receptacle. Keep the cord from heat, oil, and sharp edges.
- **KEEP BITS CLEAN AND SHARP.** Sharp bits minimize stalling. Dirty and dull bits may cause misalignment of the material and possible operator injury.
- **KEEP HANDS AWAY FROM WORK AREA.** Keep hands away from the bit. Restrain any loose clothing, jewelry, long hair, etc. that may become entangled in the bit.
- **KEEP TOOL DRY, CLEAN, AND FREE FROM OIL AND GREASE.** Always use a clean cloth when cleaning. Never use brake fluids, gasoline, petroleum-based products, or any solvents to clean tool.
- **STAY ALERT AND EXERCISE CONTROL.** Watch what you are doing and use common sense. **Do not operate tool when you are tired. Do not rush.**
- **DO NOT USE TOOL IF SWITCH DOES NOT TURN IT ON AND OFF.** Have defective switches replaced by an authorized service center.

# RULES FOR SAFE OPERATION

- **ALWAYS TURN SWITCH OFF** before disconnecting it to avoid accidental starting.
- **ALL REPAIRS, WHETHER ELECTRICAL OR MECHANICAL**, should be made at a Ryobi Authorized Service Center. Use only Ryobi identical replacement parts.
- **SAVE THESE INSTRUCTIONS.** Refer to them frequently and use to instruct other users. If you loan someone this tool, loan them these instructions also.

## **WARNING:**

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- 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.

# SPECIFIC SAFETY RULES FOR DRILL PRESSES

- Always wear eye protection.
- Always disconnect the tool from the power source when setting up, adjusting, or changing accessories.
- Do not wear gloves necktie, or loose clothing.
- Always clamp workpiece and brace against column to prevent rotation.
- Use recommended speed for drill accessory and workpiece material.
- Be sure drill bit or cutting tool is securely locked in the chuck.
- Be sure chuck key is removed from the chuck before connecting to power source or turning power **ON**.
- Adjust the table or depth stop to avoid drilling into the table. Shut off the power, remove the drill bit, and clean the table before leaving machine.
- Do not connect tool to power source or operate until it is completely assembled and installed according to the instructions. If any part of your drill press malfunctions or has been damaged or broken, do not operate until the part is properly repaired or replaced.
- Never place your fingers in a position where they could contact the drill or other cutting tool if the workpiece should unexpectedly shift.
- Never use your hand to hold the object while drilling. Always clamp the object tight on the work table or use a drill vise to prevent accidental injury.
- Never perform any operation by moving the head or table with respect to one another. Do not turn the motor switch **ON** or start any operation before checking that the head and table lock handles are clamped tight to column and head and table support collars are correctly positioned.
- Before engaging the power switch **ON**, make sure the belt guard is down and the chuck is installed properly.
- Lock the motor switch **OFF** when leaving the drill press. Do not perform layout, assembly, or set-up work on the table while the cutting tool is rotating, switched on or connected to a power source.
- Firmly clamp or bolt your drill press to a work bench or table.
- Mount your drill press to either a workbench or mounting board; failure to comply could result in possible serious injury.

# RULES FOR SAFE OPERATION

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

## SYMBOL

## MEANING



### SAFETY ALERT SYMBOL:

Indicates danger, warning, or caution. May be used in conjunction with other symbols or pictographs.



**DANGER:** Failure to obey a safety warning will result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.



**WARNING:** Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.



**CAUTION:** Failure to obey a safety warning may result in property damage or personal injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

## NOTE:

Advises you of information or instructions vital to the operation or maintenance of the equipment.

## IMPORTANT

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the tool to your nearest **RYOBI AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical Ryobi replacement parts.



### WARNING:

Observe all normal safety precautions related to avoiding electrical shock.



### WARNING:

Do not attempt to operate this tool until you have read thoroughly and understand completely all instructions, safety rules, etc., contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Save operator's manual and review frequently for continuing safe operation, and instructing others who may use this tool.

# ELECTRICAL

## EXTENSION CORDS

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. When using a power tool at a considerable distance from the power source, use an extension cord heavy enough to carry the current that the tool will draw. An undersized extension cord will cause a drop in line voltage, resulting in a loss of power and causing the motor to overheat. Use the chart provided below to determine the minimum wire size required in an extension cord. Only round jacketed cords listed by Underwriter's Laboratories (UL) should be used.

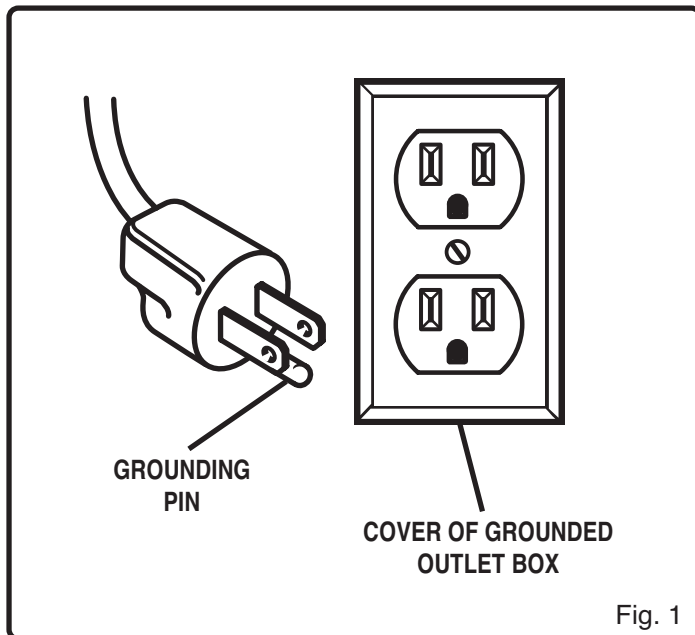
Length of Extension Cord	Wire Size (A.W.G.)
Up to 50 feet	16

When working with the tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters **WA** on the cord's jacket.

Before using an extension cord, inspect it for loose or exposed wires and cut or worn insulation. Repair or replace a damaged or worn cord immediately.

### CAUTION:

Keep the cord away from the cutting area and position the cord so that it will not be caught on material, tools, or other objects during cutting.



## ELECTRICAL CONNECTION

Your Ryobi Drill Press is powered by a precision built electric motor. It should be connected to a **power supply that is 120 volts, 60Hz**. If the machine does not operate when plugged into an outlet, double check the power supply.

## GROUNDING INSTRUCTIONS

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.

Repair or replace a damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet like the one shown in *Figure 1*. It also has a grounding pin like the one shown.

# GLOSSARY OF TERMS

## Base

Large rectangular plate that secures the drill press to a benchtop or other sturdy, level surface.

## Chip

The material extracted from the hole in a drilling operation.

## Chuck

The clamping device at the end of the spindle that secures the drill bit.

## Chuck Key

A fitted key used to tighten and loosen the chuck.

## Column

Large perpendicular rod that supports the work table and drill press head assembly.

## Depth Stop

Adjustment control which allows the operator to control the depth of the hole in a drilling operation.

## Drill Bit

Fluted cutting tool used in a drilling operation.

## Drill Press Head

The assembly at the top of the column which houses the motor, quill, and spindle.

## Feed

The speed and force with which the drill bit is lowered into the workpiece.

## Feed Handles

Three handles attached to the quill which allow the operator to lower the chuck and bit during a drilling operation.

## Motor Pulley

A grooved, conical pulley driven by the motor and responsible for driving the spindle pulley by means of a belt.

## Pilot Hole

A small hole drilled in a workpiece that serves as a guide for drilling large holes accurately.

## Quill

Also known as the Feed Shaft. Responsible for lowering the chuck and bit into the workpiece and regulating the depth of the hole in a drilling operation.

## Spindle

The rotating shaft upon which the chuck is attached.

## Spindle Pulley

A grooved, conical pulley responsible for rotating the spindle. The spindle pulley is driven by the motor pulley by means of a belt.

## Workpiece

The object into which a hole is to be drilled.

## Worktable

Flat, level surface supported on the column and able to be positioned at various angles vertically on the column in order to accommodate different size workpieces.

# UNPACKING

- Carefully remove all parts from the shipping carton.
- Do not discard the packing material until you have carefully inspected the drill press, identified all parts, and satisfactorily operated your new tool.
- If all parts have been included, proceed to assembly.
- If you are missing a part, contact your dealer to obtain it before attempting to assemble the tool.
- Examine all parts to make sure no breakage has occurred during shipping. Any damaged or missing part should be replaced before attempting to use the tool.

**Note:** If any parts are damaged or missing, do not attempt to plug in the power cord and turn the switch on until the damaged or missing parts are obtained and are installed correctly.

## WARNING:

Do not allow familiarity with your drill press to make you careless. Remember that a careless fraction of a second is sufficient to inflict severe injury.

## WARNING:

Do not attempt to assemble the drill press, plug in the power cord, or turn on switch if any parts are damaged or missing. Failure to heed this warning could result in serious personal injury.

# LOOSE PARTS

Check all loose parts with the list below. Assemble according to the instructions on the following pages.

- Head Assembly
- Column Assembly
- Column Support
- Table
- Belts (2)
- Table Lock Handle (2)
- Base
- Idler Pulley
- Feed Handles (3)
- Spindle
- Chuck Tool
- Chuck Key
- Chuck
- Housing Knob and Screw
- Hex Bolts, M10 x 25 (4)
- Hex Wrench
- Table Adjustment Handle
- Operator's Manual (not shown)

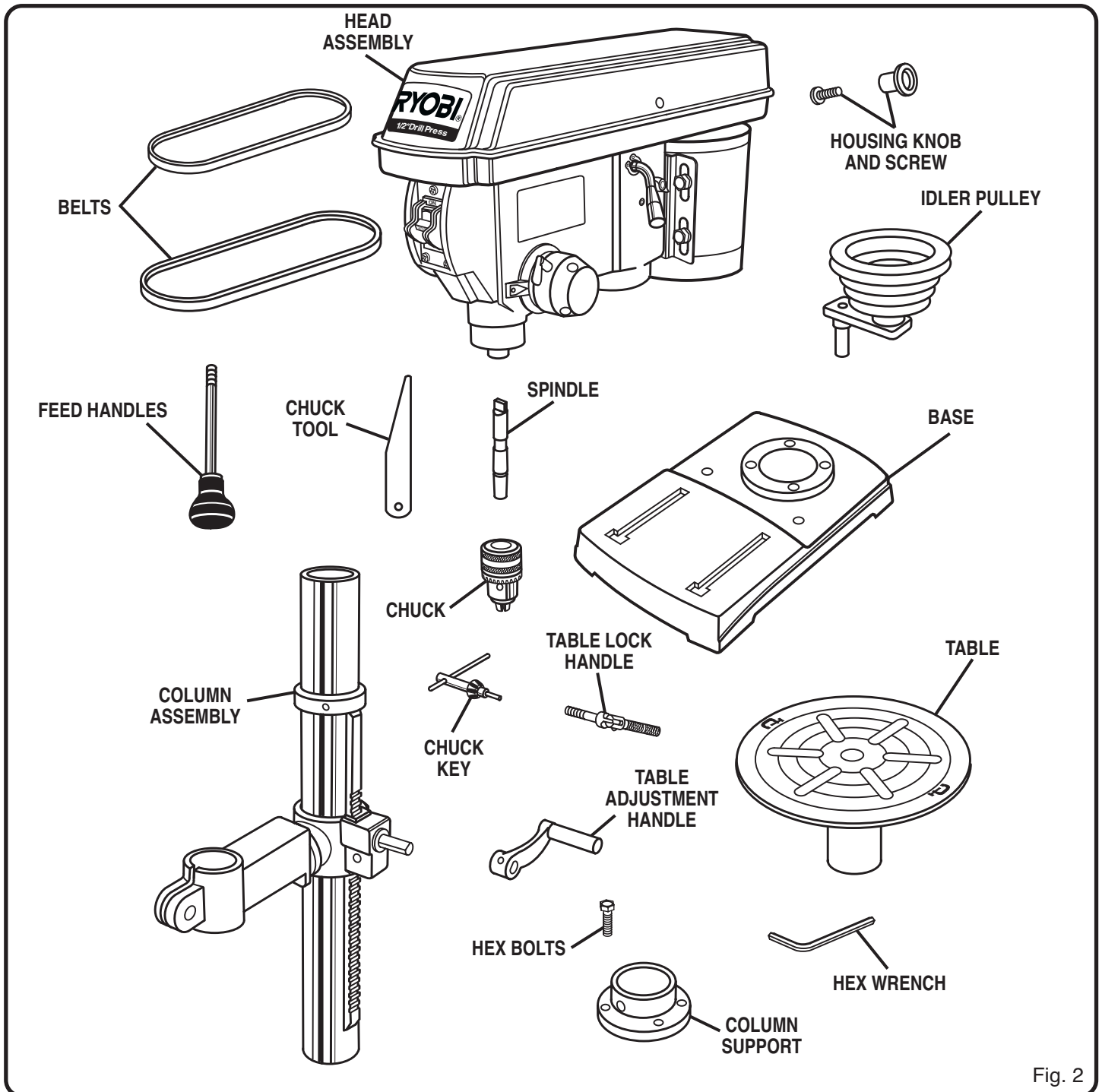


Fig. 2



# FEATURES

## KNOW YOUR DRILL PRESS

See Figure 3.

Before attempting to use your drill press, familiarize yourself with all the operating and safety requirements.

### BELT TENSION LEVER

The belt tension lever is used to release or tighten belt tension.

### BELT TENSION SCREWS

Belt tension screws on each side of the pulley housing lock the belt tension lever in place.

### BEVEL SCALE

The bevel scale indicates the degree the worktable is tilted up to 45°.

### CHUCK KEY STORAGE

For easy access, the chuck key should be placed in the built-in chuck key storage.

### DEPTH GAUGE

A depth gauge is located between the pulley housing and feed handles to aid drilling at desired depths.

### DEPTH STOP

The adjustable depth stop is used for accurate depth measurement and repetitive drilling.

### FEED HANDLES

Feed handles raise and lower the chuck and bit during the drilling operation.

### MOTOR

Equipped with an industrial duty, induction motor for long lasting, smooth performance.

### SPINDLE SPEED

Twelve spindle speeds allows for drilling of a variety of materials from wood to plastic to metal.

### SWITCH AND SWITCH KEY

Your drill press has an easy access power switch. To lock in the **OFF** position, remove the switch key. Place the key in a location inaccessible to children and others not qualified to use the tool.

### TABLE ADJUSTMENT HANDLE

The table adjustment handle is used to raise and lower the worktable.

### WORKTABLE

For added versatility, the worktable can be rotated or tilted. The slotted worktable and base allows easy application of clamping devices.

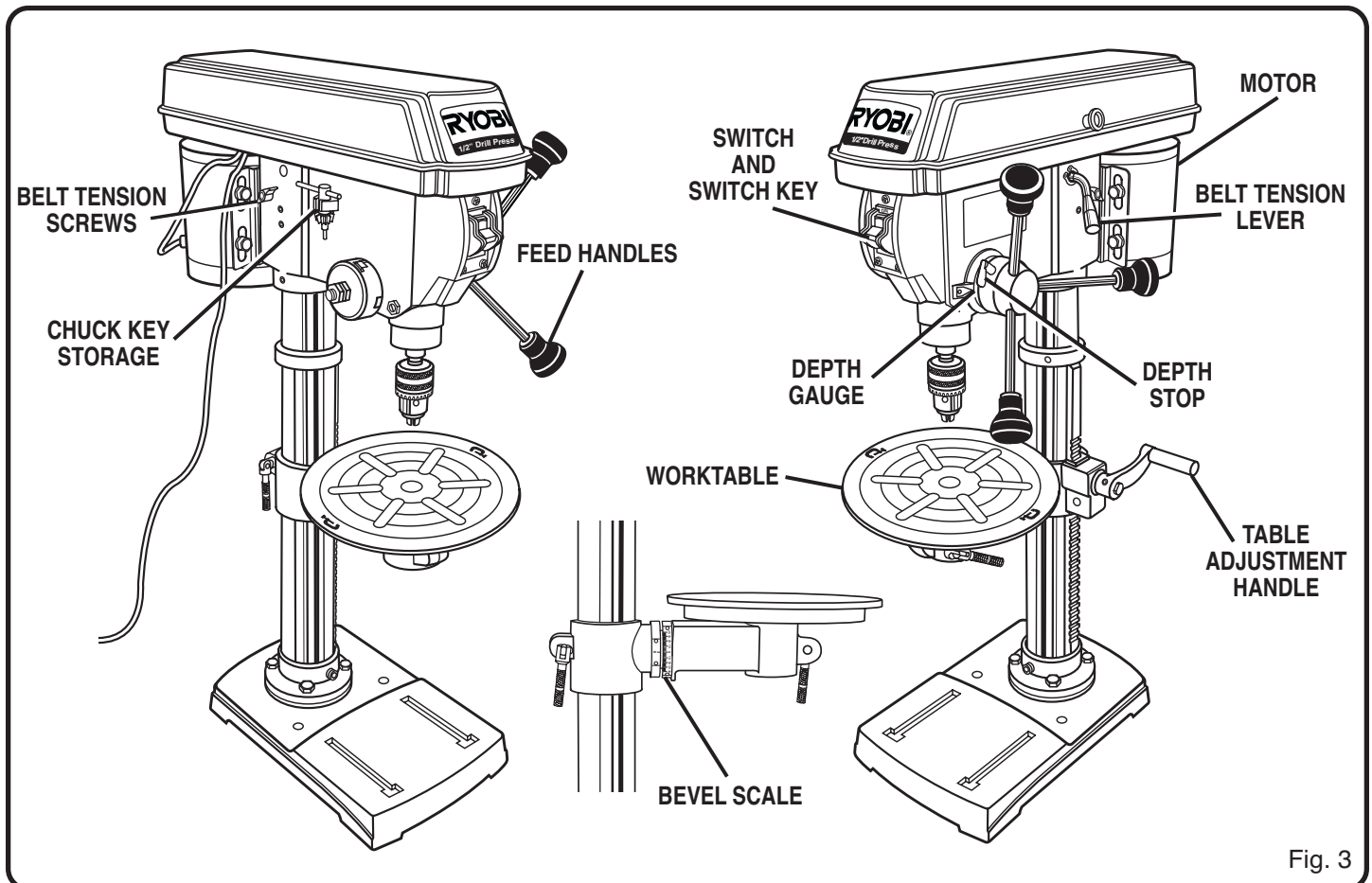


Fig. 3

# ASSEMBLY

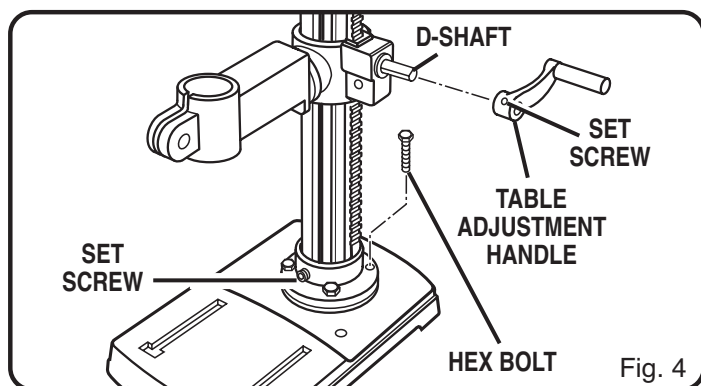
## **⚠ WARNING:**

Do not connect to power supply until assembly is complete. Failure to comply could result in accidental starting and possible serious injury.

## ATTACHING THE COLUMN ASSEMBLY

See Figure 4.

- Place base on a flat surface. Align screw holes in the column support with screw holes in the base.
- Place a hex bolt in each hole and tighten using an adjustable wrench.
- Loosen the set screw in the column support.
- Set the column assembly in the base and secure in place by tightening the set screw clockwise.



## TABLE AND TABLE ADJUSTMENT HANDLE ASSEMBLY

See Figures 4 and 5.

- Slide the table adjustment handle onto the D-shaft aligning the flat side of the shaft with the set screw. Secure the table adjustment handle by tightening the set screw. See Figure 4.
- Insert a table lock handle through the unthreaded hole into the threaded hole at the rear of the table support. Tighten by turning the table lock handle clockwise.
- Insert a table lock handle through the unthreaded hole into the threaded hole in the front of the table support.
- Place the table in the table support. Tighten by turning the table lock handle clockwise. See Figure 5.

## INSTALLING THE HEAD ASSEMBLY, FEED HANDLES, AND HOUSING KNOB

See Figures 6 and 7.

- Place the head assembly on the column and slide it as far down the column as it will go. Tighten the two set screws with the hex key provided.
- Attach the three feed handles by screwing them into the threaded holes in the hub. Tighten using a wrench on the flats on the feed handles. See Figure 6.
- Unscrew the pan head screw from the housing knob. Open the head assembly and fit the housing knob over the hole on the outside and the screw in the hole from the inside. Tighten into place.

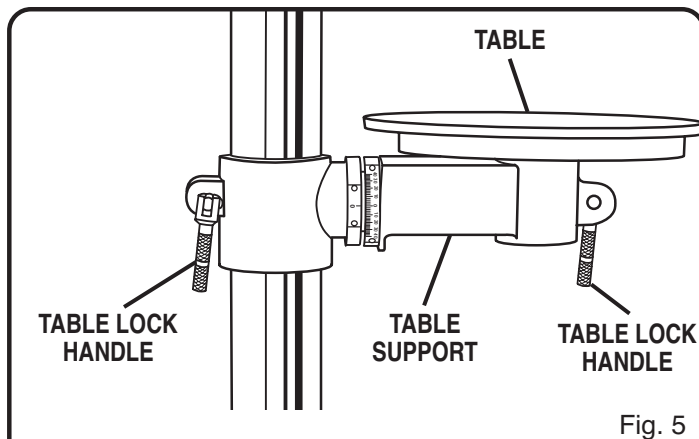


Fig. 5

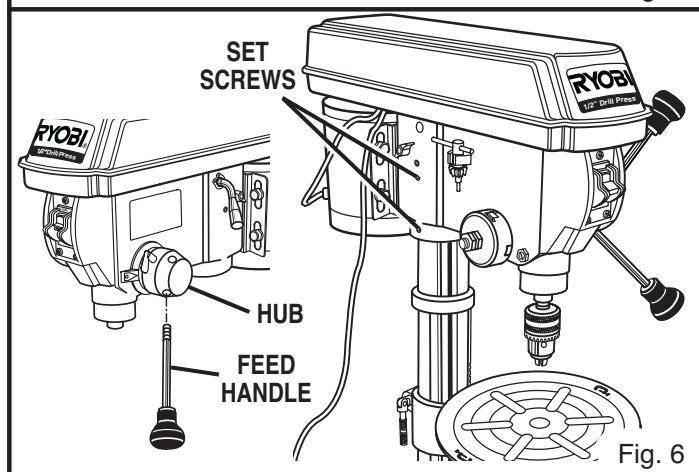


Fig. 6

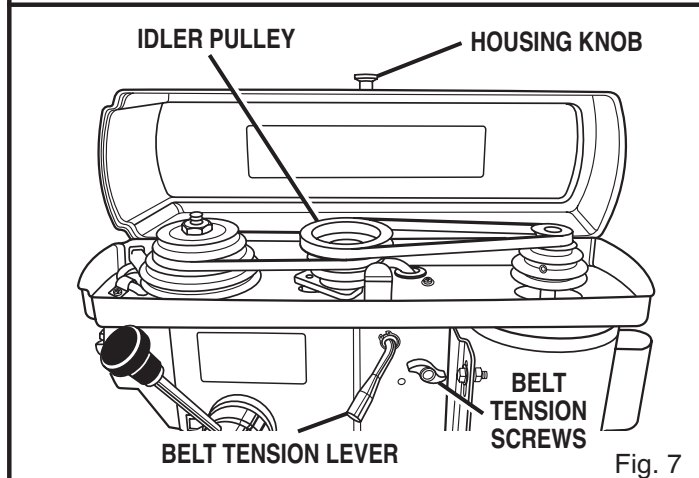


Fig. 7

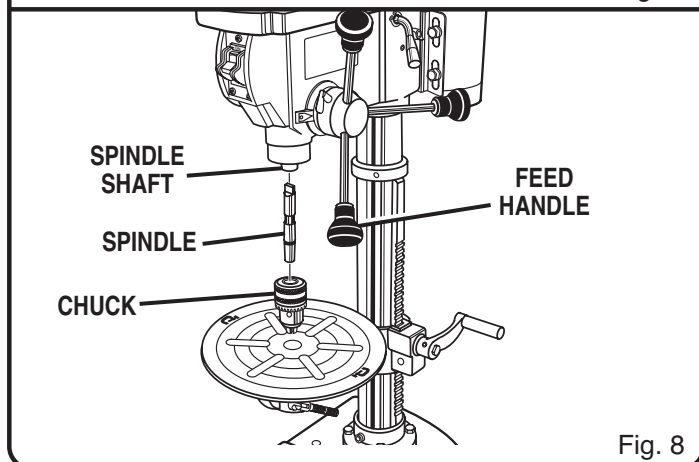


Fig. 8

# ASSEMBLY

## INSTALLING THE IDLER PULLEY

See Figures 7 and 8.

- Place idler pulley in the center hole in the head assembly. Fit one belt over the spindle pulley and the idler pulley and the other belt over the motor pulley and the idler pulley. Tighten the belt tension lever and the two belt tension screws. See Figure 7.
- Fit the spindle into the spindle shaft turning it to the right until it slips into place. See Figure 8.
- To install the chuck raise the table using the table adjustment handle. Place the chuck on the table and lower the spindle shaft. Once the spindle shaft is lowered and aligned with the chuck, swiftly turn the feed handles counterclockwise to attach the chuck to the spindle.

## MOUNTING DRILL PRESS TO WORKBENCH

See Figure 9.

If your drill press is to be used in a permanent location, secure it to a workbench or other stable surface. When mounting the drill press to a workbench, holes should be drilled through the supporting surface of the workbench.

- Mark holes on workbench where drill press is to be mounted using holes in drill press base as a template for hole pattern.
- Drill holes through workbench.
- Place drill press on workbench aligning holes in the base with holes drilled in the workbench.
- Insert bolts (not included) and tighten securely with lock washers and hex nuts (not included).  
**Note:** All bolts should be inserted from the top. Install the lock washers and hex nuts from the underside of the workbench.

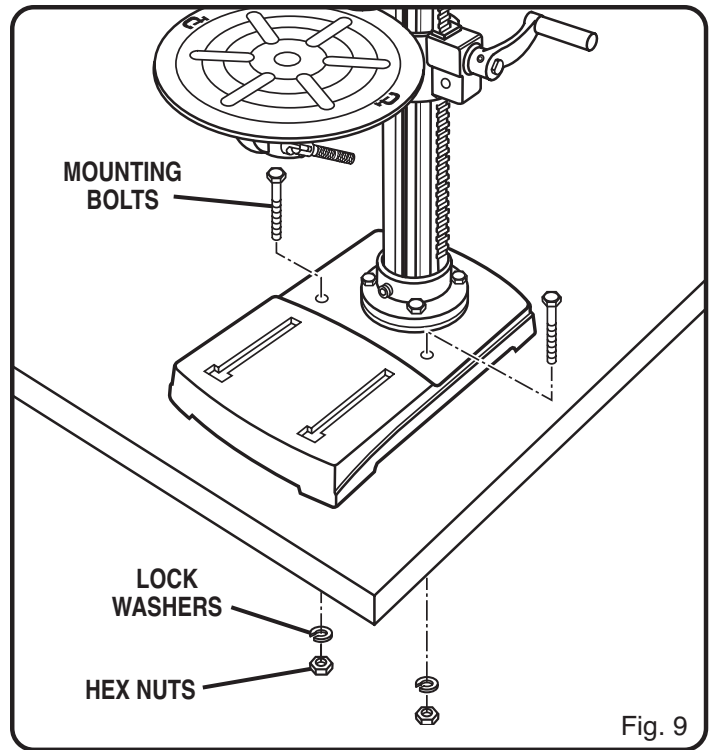
## CLAMPING DRILL PRESS TO WORKBENCH

See Figure 10.

If your drill press is to be used as a portable tool, fasten it permanently to a mounting board that can easily be clamped to a workbench or other stable surface. The mounting board should be of sufficient size to avoid tipping while drill press is in use. Any good grade plywood or chipboard with a 3/4 in. (19 mm) thickness is recommended.

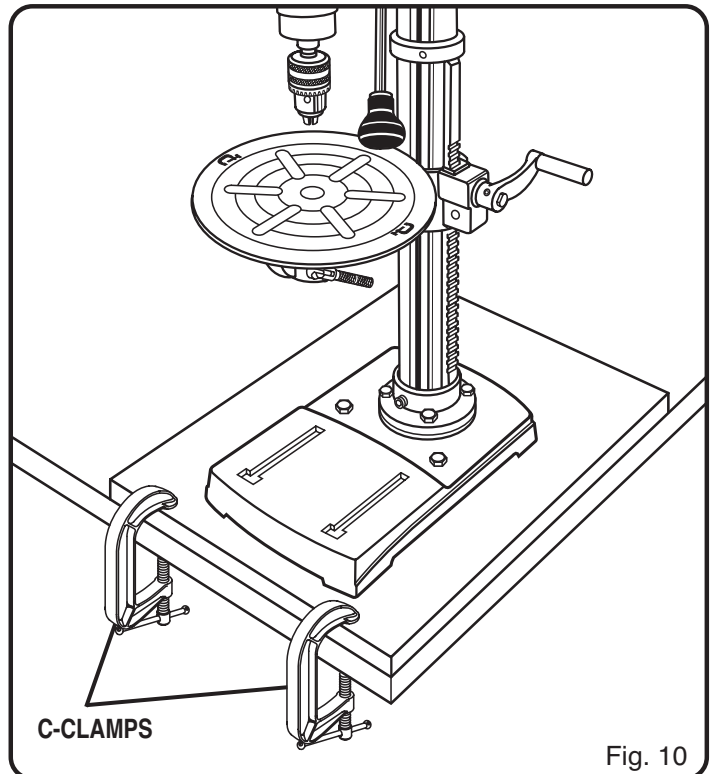
- Mark holes on board where drill press is to be mounted using holes in drill press base as a template for hole pattern.
- Follow last three steps in section *Mounting Drill Press to Workbench*.

If lag bolts are used, make sure they are long enough to go through holes in drill press base and material the drill press is being mounted to. If machine bolts are used, make sure bolts are long enough to go through holes in drill press, the material being mounted to, and the lock washers and hex nuts.



Once the drill press is securely mounted on a stable surface, check for the following:

- Check for vibration when the motor is switched **ON**. Adjust and retighten the mounting hardware as necessary.
- Check the table assembly to assure smooth movement up and down the column.
- Check to assure that the spindle shaft moves smoothly.



# ADJUSTMENTS

## **⚠ WARNING:**

Before performing any adjustment, make sure the drill press is unplugged from the power supply and the switch is in the OFF position. Failure to heed this warning could result in serious personal injury.

## ADJUSTING TABLE HEIGHT

See Figure 11.

- Hold the table with one hand then loosen the table lock handle.
- To raise the table, turn the table adjustment handle clockwise.
- To lower the table, turn the table adjustment handle counterclockwise.
- Once the table is in the desired position, retighten the table lock handle.

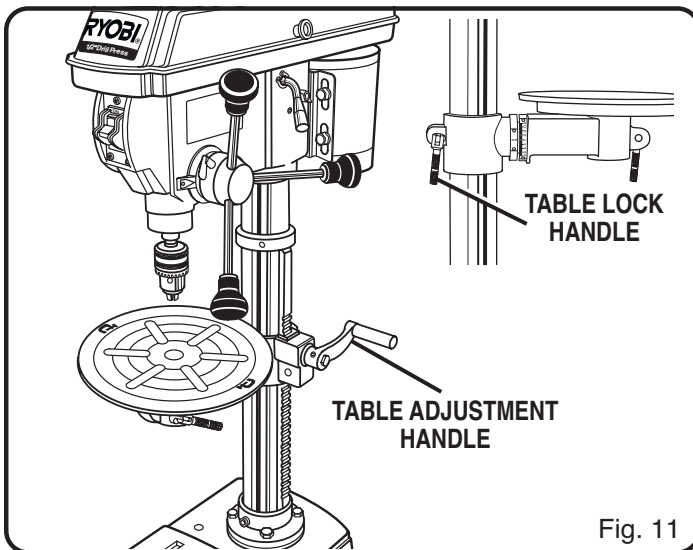


Fig. 11

## BEVEL ADJUSTMENT

See Figure 12.

Your drill press is equipped with a tilting table that allows you to drill angled holes. The table can be tilted left or right, from 0°-45°.

### To tilt the table:

- Loosen the large hex bolt located beneath the table.
- Use the bevel scale to tilt the table to the desired angle.
- Retighten the hex bolt securely.

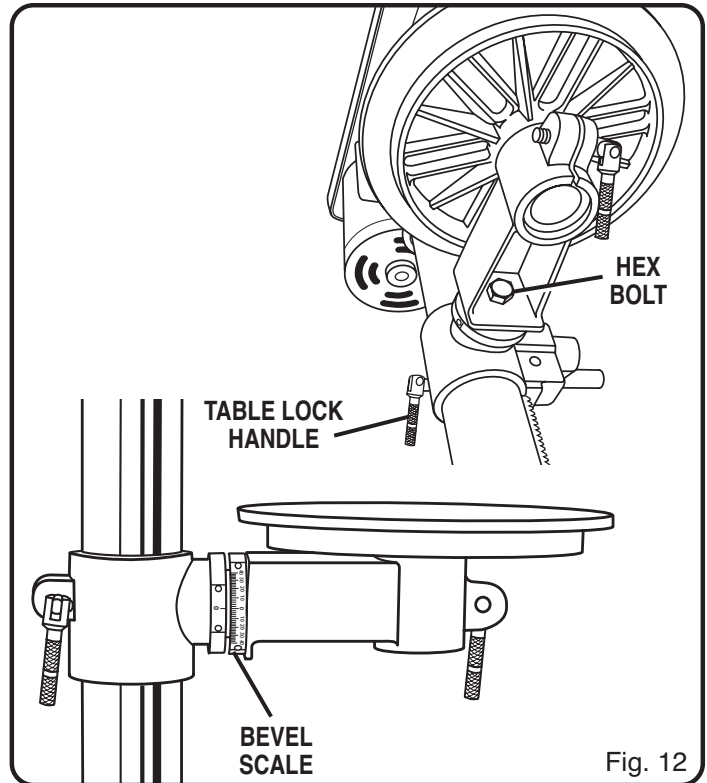


Fig. 12

## DEPTH STOP ADJUSTMENT

See Figure 13.

When a number of holes are to be drilled to exactly the same depth, the depth stop is used as follows.

- Loosen depth stop.
- Rotate depth gauge clockwise to desired measurement.
- Retighten depth stop securely. This will stop the spindle assembly at desired depth.

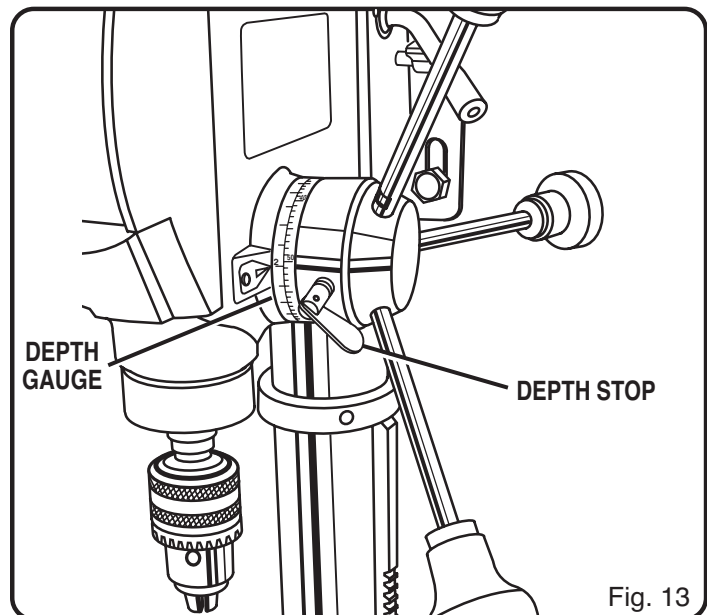


Fig. 13

# ADJUSTMENTS

## CHANGING SPEEDS

See Figure 14.

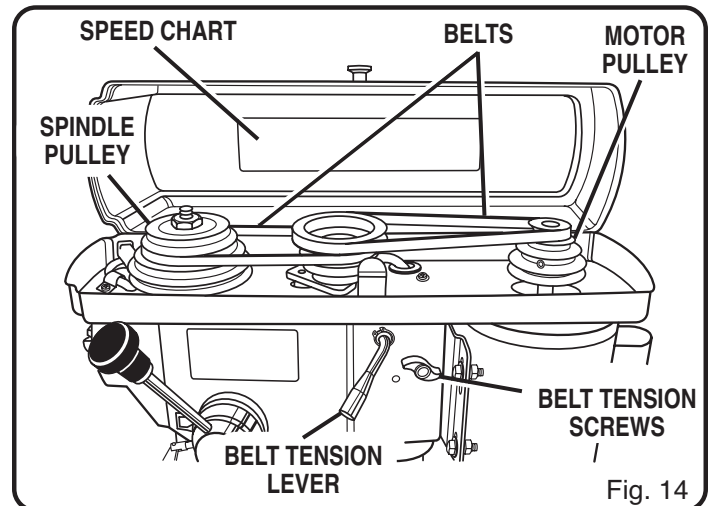
### **WARNING:**

Before performing any adjustment, make sure the drill press is unplugged from the power supply and the switch is in the OFF position. Failure to heed this warning could result in serious personal injury.

The spindle speed is determined by the location of the belts on the pulleys inside the head assembly. The speed chart located on the cover inside the head assembly shows the recommended speed and pulley configuration for each drilling operation. To change the pulley configuration, refer to figure 14 and proceed as follows:

- Loosen the two belt tension screws located on each side of the head assembly.
- Push the belt tension lever to release belt tension and to loosen the belts.

- Open the head assembly cover and reposition the belt according to the speed chart. Close the cover.
- Push the belt tension lever firmly back into position assuring drive belt is tight. While holding tension on the motor, retighten the two belt tension knobs securely.



# OPERATION

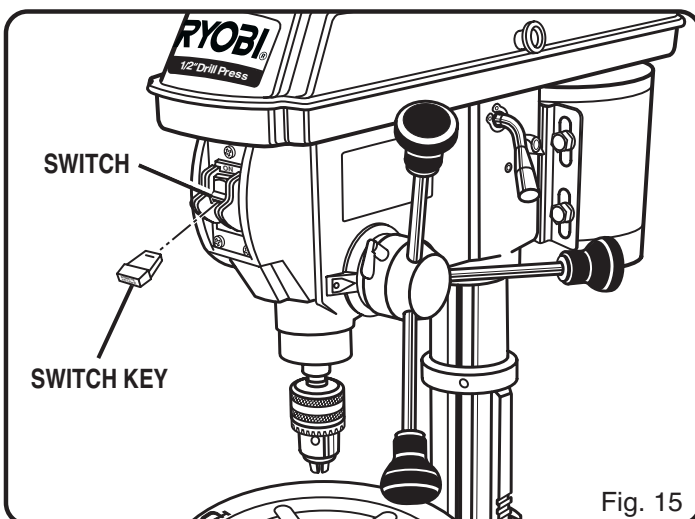
### **WARNING:**

Before attempting to use your drill press familiarize yourself with all operating features and safety requirements.

## LOCKING THE SWITCH

See Figure 15.

- Place the switch in the **OFF** position.
- Wait until the drill press has come to a full and complete stop.
- Remove the switch key from the switch assembly. Store key in safe place.



## SELF-EJECTING CHUCK KEY

The self-ejecting chuck key ensures that the chuck key is removed from the chuck **BEFORE** the drill press is turned on.

In order to loosen or tighten the chuck using the chuck key, push the key into the chuck hole. Rotate the key clockwise to tighten the chuck, counterclockwise to loosen the chuck. When you are finished with the chuck key, always replace it in the chuck key storage located on the head assembly.

### **WARNING:**

Use only the self-ejecting chuck key provided. Always remove chuck key and store in the on-board chuck key storage. Failure to heed this warning could result in serious personal injury.

### **WARNING:**

Always remember to remove the chuck key from the table surface before turning on the drill press. Failure to heed this warning could result in serious personal injury.

## TABLE ROTATION

When drilling large objects it may be necessary to swing the table out of the way. Simply loosen the table lock lever, rotate the table, and retighten table lock lever.

**Note:** When using the base as a work surface, the workpiece must be clamped securely to the base.

# OPERATION

## INSTALLING BITS

See Figure 16.

- Unplug your drill press.
- Open or close the chuck jaws to a point where the opening is slightly larger than the drill bit you intend to use.
- Insert drill bit into chuck the full length of the jaws.

### **⚠ WARNING:**

Do not insert drill bit into chuck jaws and tighten as shown in figure 16. This could cause drill bit to be thrown from your drill resulting in possible serious personal injury or damage to your chuck.

- Tighten chuck jaws securely using the chuck key provided. **DO NOT** use a wrench to tighten or loosen the chuck jaws.
- Remove chuck key and return to storage area.

## DRILLING

See Figure 17.

- Using a C-clamp or similar clamping device, secure the workpiece to the work table. To protect the surface of the workpiece, use a piece of scrap between the clamp and the workpiece.
- Select the proper drill bit based on the hole size desired. For large holes, drill a pilot hole first, using a smaller diameter bit.
- Set table assembly to desired height. If desired, set feed shaft at desired spindle depth.
- Make sure the work table is free of all loose objects and that the bit is not in contact with the workpiece.
- Plug electrical cord into power supply and turn switch **ON**. Make sure spindle rotates freely.
- Slowly lower drill bit into workpiece. Do not force the bit, let the drill press do the work.
- Once the hole is completed, raise the spring-loaded feed shaft to its normal position. This will automatically raise the chuck and bit.

## DRILLING TIPS

If the hole is large, it's a good idea to drill a smaller pilot hole before drilling the final one. Your hole will be more accurately positioned, rounder, and the bits will last longer.

If the hole is deeper than it is wide, back off occasionally to clear the chips. When drilling metal also use a coolant.

As you increase the drill size, you may need to reduce the spindle speed.

If drilling a through hole, make sure that the bit will not drill into the table after moving through your work.

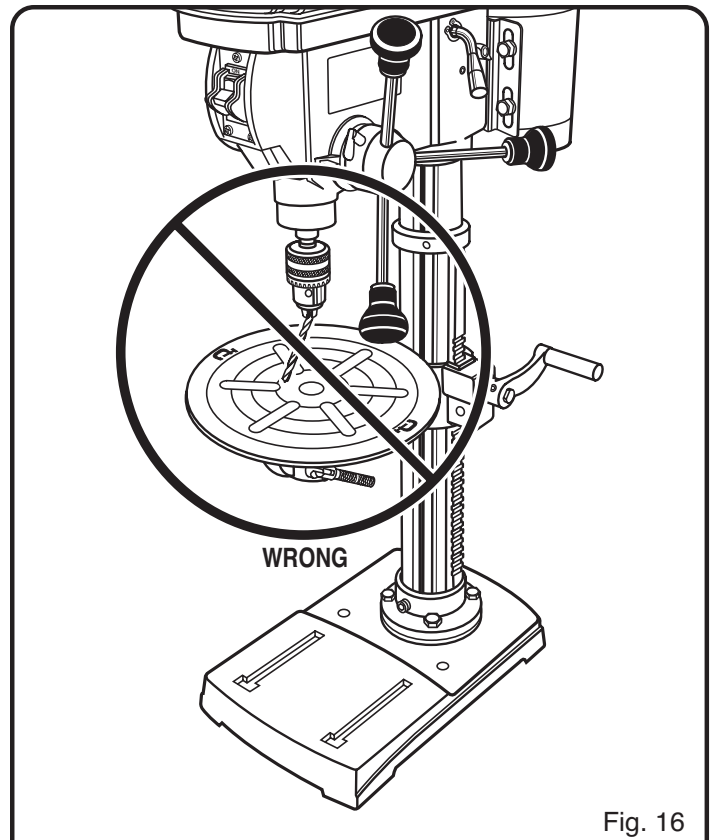


Fig. 16

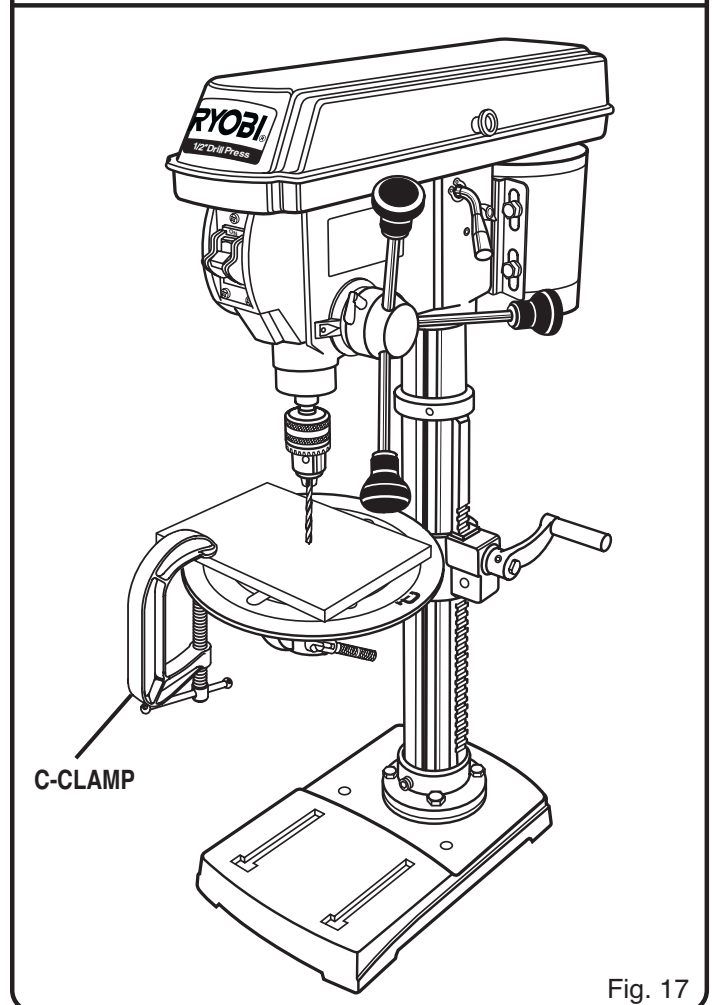


Fig. 17

# MAINTENANCE

## **⚠ WARNING:**

When servicing use only identical Ryobi replacement parts. Use of any other parts may create a hazard or cause product damage.

## **⚠ WARNING:**

To avoid serious personal injury make sure the drill press is turned OFF and the cord is unplugged from the power source before performing any maintenance or adjustment.

## GENERAL MAINTENANCE

After using your drill press, clean it completely and lubricate all sliding and moving parts. Apply a light coat of automotive type paste wax to the table and column to help keep the surfaces clean.

## HEAD ASSEMBLY

Frequently blow out any dust that may accumulate inside the motor housing.

## GEAR RACK

Periodically lubricate the gear rack in order to keep the vertical movement smooth and to help prolong the life of your drill press.

## PULLEYS

See Figure 18.

Should you feel an unusually high level of vibration, the pulleys may not be tightly secured on the motor and/or spindle shafts. To make sure the pulleys are properly seated and tight, locate the set screw on the motor pulley and the hex nut on the spindle pulley as shown in Figure 18. Tighten the set screw with a hex wrench and the hex nut with an adjustable wrench.

**Note:** Turn hex nut counterclockwise to tighten.

## CHUCK TOOL

The Chuck Tool is used to remove the chuck and chuck spindle when either an attachment is to be used or when large drill bits with a tapered shank are to be used.

Unplug the drill press.

Lower the spindle until the slots in the spindle are visible.

Insert the chuck tool into the slot in the spindle. While supporting the chuck in one hand, tap the chuck tool lightly with a rubber mallet until the chuck and chuck spindle release from the drill press.

Remove the chuck tool from the drill press spindle.

## LUBRICATION

The ball bearings in the quill and V-belt pulley are permanently lubricated. To lubricate the spindle, pull quill down to maximum depth and oil moderately once every three months. Oil all slide bars lightly every two months. If cranking becomes difficult, grease bracket lightly.

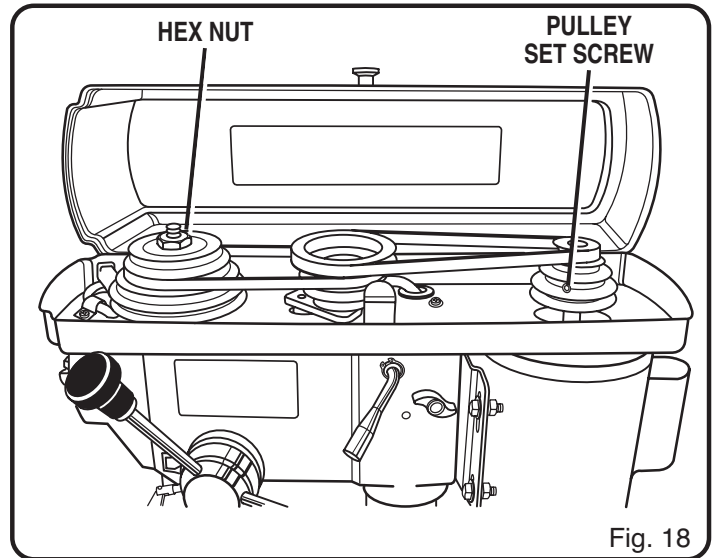


Fig. 18

# TROUBLE SHOOTING

Problem	Possible Cause	Solution
Noisy operation	Incorrect belt tension. Dry spindle. Loose spindle pulley or motor pulley.	Adjust belt tension. Lubricate spindle. Tighten set screws in pulleys.
Bit burns or smokes	Incorrect speed. Chips not coming out of hole. Dull bit. Feeding too slow. Not lubricated.	Change speed. Retract bit frequently to clear chips. Sharpen or replace bit. Feed fast enough, allow drill to cut. Lubricate bit for metal work.
Excessive drill runout or wobble	Bent bit. Bit not properly installed in chuck. Chuck not properly installed. Worn spindle bearings.	Replace bit. Install bit properly. Install chuck properly. Contact Ryobi Authorized Service Center.
Drill bit binds in workpiece	Excessive feed pressure. Improper belt tension.	Reduce feed pressure. Adjust belt tension.
Workpiece support loosens	Workpiece not supported or clamped properly.	Check support and/or reclamp workpiece.







# OPERATOR'S MANUAL

## 12 in. (305 mm) Drill Press

### Model DP120

#### EXTENSION CORD CAUTION

When using a power tool at a considerable distance from a power source, be sure to use an extension cord that has the capacity to handle the current the tool will draw. An undersized cord will cause a drop in line voltage, resulting in overheating and loss of power. Use the chart to determine the minimum wire size required in an extension cord. Only round jacketed cords should be used.

When working with a tool outdoors, use an extension cord that is designed for outside use. This is indicated by the letters "WA" on the cord's jacket.

Before using any extension cord, inspect it for loose or exposed wires and cut or worn insulation.

\*\*Ampere rating

(on tool data plate) 0-2.0 2.1-3.4 3.5-5.0 5.1-7.0 7.1-12.0 12.1-16.0

Cord Length	Wire Size (A.W.G.)					
	16	16	16	16	14	14
25'	16	16	16	16	14	14
50'	16	16	16	14	14	12
100'	16	16	14	12	10	—

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

*\*\*Used on 12 gauge - 20 amp circuit.*

#### • SERVICE

Now that you have purchased your tool, should a need ever exist for repair parts or service, simply contact your nearest Ryobi Authorized Service Center. Be sure to provide all pertinent facts when you call or visit. Please call 1-800-525-2579 for your nearest Ryobi Authorized Service Center. You can also check our web site at [www.ryobitools.com](http://www.ryobitools.com) for a complete list of Authorized Service Centers.

#### • MODEL NO.

The model and serial numbers of your tool will be found on the data plate attached to the head assembly. Please record the serial number in the space provided below.

- MODEL NUMBER DP120
- SERIAL NUMBER \_\_\_\_\_

#### RYOBI TECHNOLOGIES, INC.

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