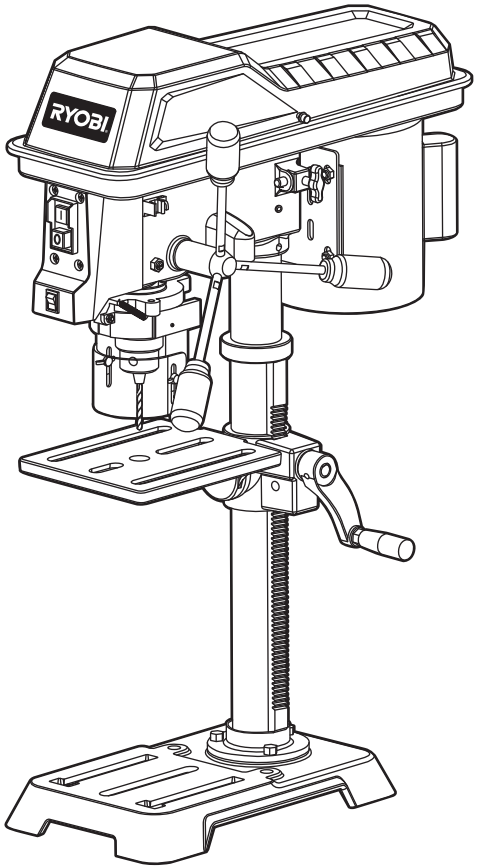
RDP102L

254MM (10”) DRILL PRESS WITH LASER
OPERATOR’S MANUAL



DESCRIPTION

1. Head assembly
2. Table
3. Base
4. Rack
5. Column assembly
6. Rack ring
7. Feed handles
8. Worm gear
9. Table lock handle
10. Table crank handle
11. Hex bolts
12. Chuck
13. Chuck key
14. 4 mm hex key
15. 3 mm hex key
16. Slotted Screwdriver
17. Adjustable wrench
18. 12 mm wrench
19. Hammer or rubber mallet
20. Combination square
21. Block of wood
22. Motor
23. Laser head
24. Quill return coil / spring
25. Table bracket
26. Pulley cover
27. ON/OFF switch
28. Laser switch
29. Upper safe guard
30. Mounting holes
31. Head locking screw
32. Belt tension lock knob
33. Chuck key holder
34. Spindle pulley
35. Motor pulley
36. Table support
37. Table crank handle hole
38. Column support
39. Set screw
40. Head
41. Head locking set screw
42. Threaded holes
43. Hub assembly
44. Spindle
45. Bolt (not included)
46. Lock washer (not included)
47. Rubber washer (not included)
48. Flat washer (not included)
49. Jam nut (not included)
50. Hex nut (not included)
51. Worksurface
52. Bevel scale
53. Table bevel locking bolt
54. Nut
55. Lock nut
56. Screw
57. Lower front notch
58. Spring cap
59. Outer jam nut
60. Inner nut
61. Notch
62. Boss
63. Chuck jaws
64. Drill bit
65. Depth
66. Depth scale pointer
67. Depth scale
68. Upper nut
69. Lower nut
70. Depth stop lug
71. Workpiece

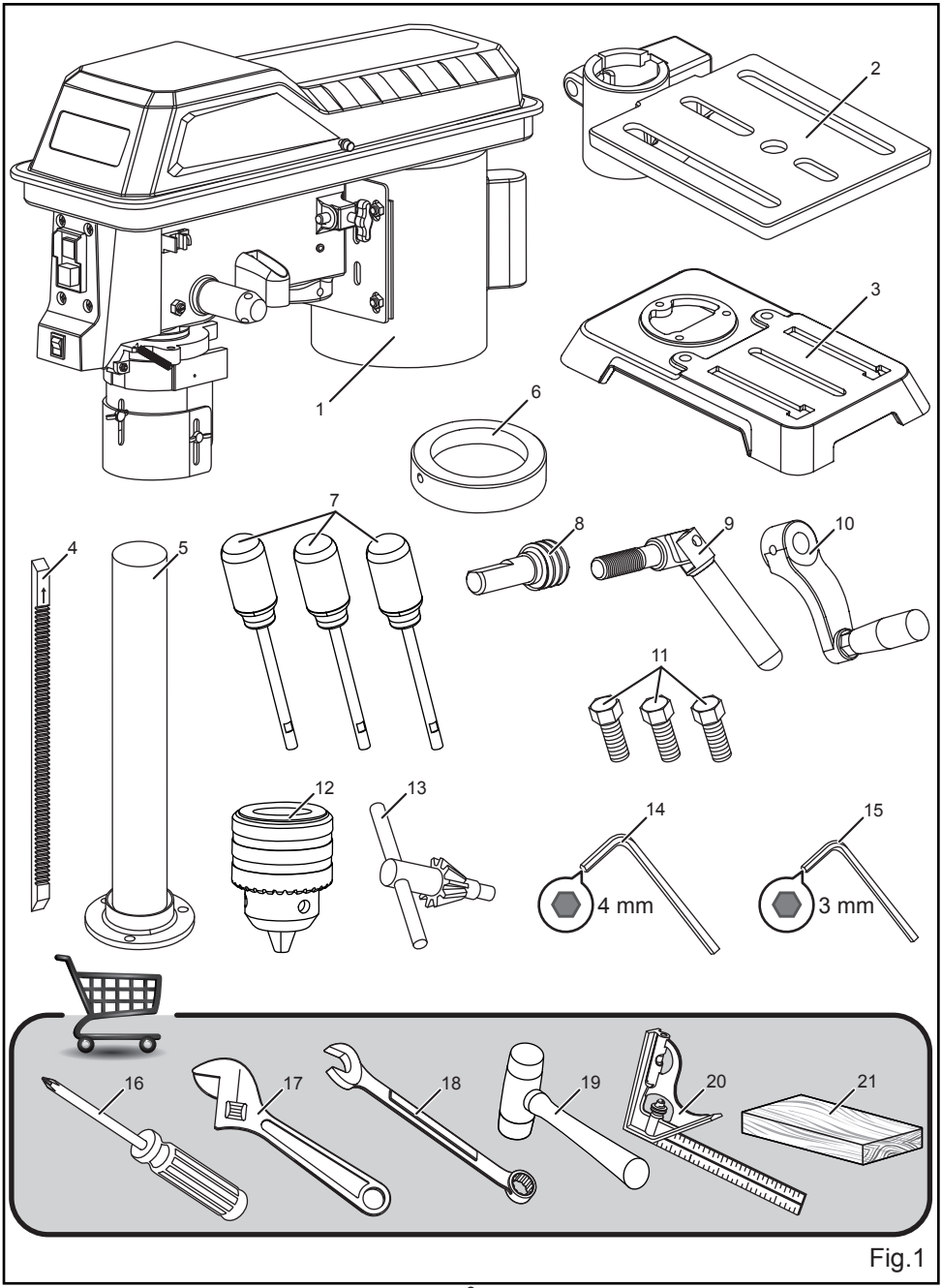


Fig.1

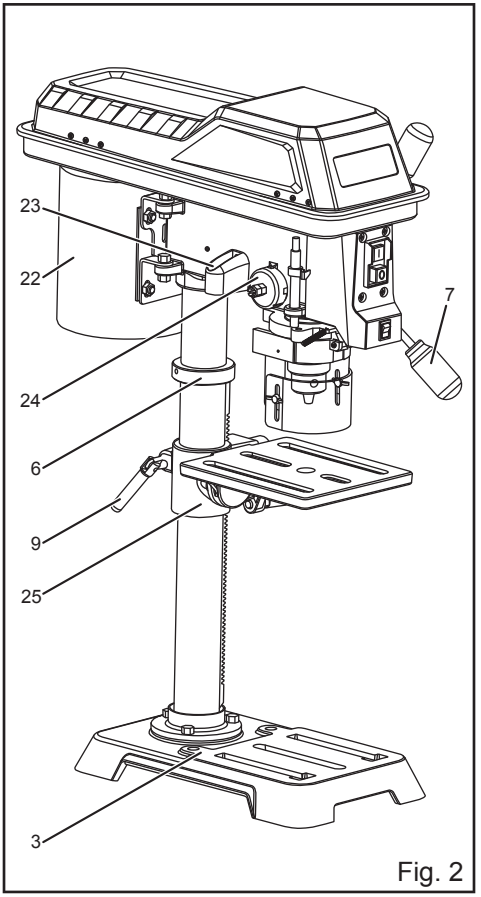
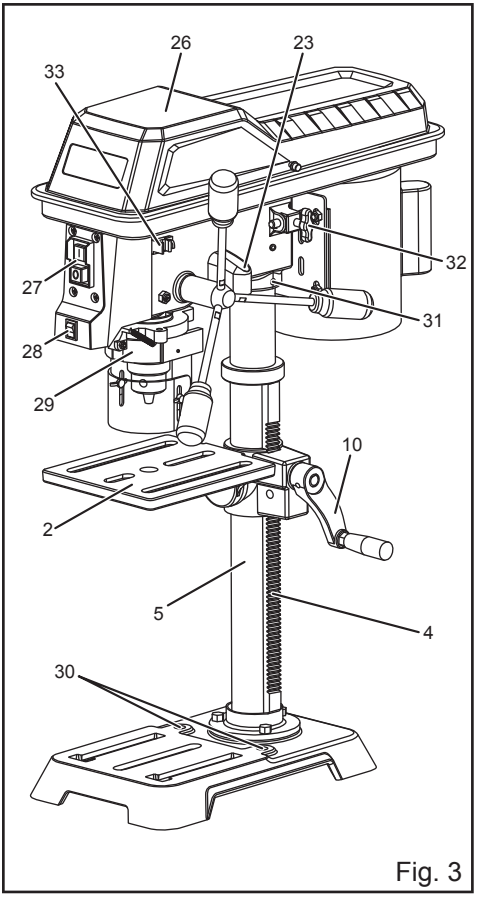


Fig. 2



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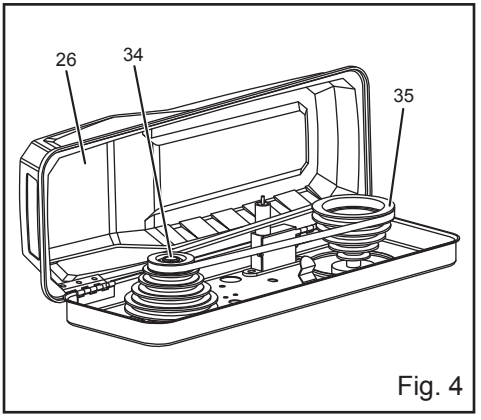

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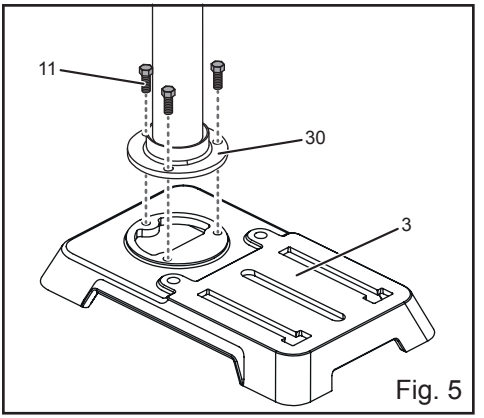

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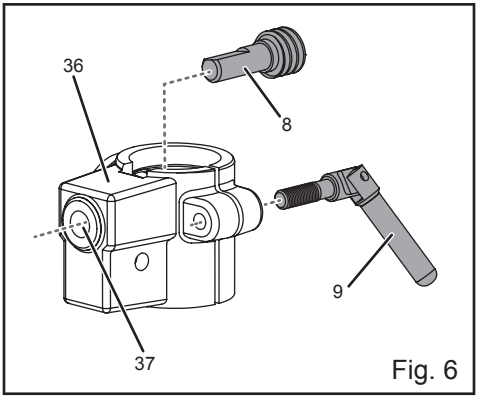

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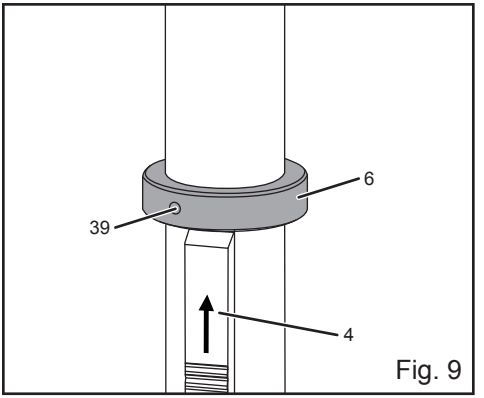

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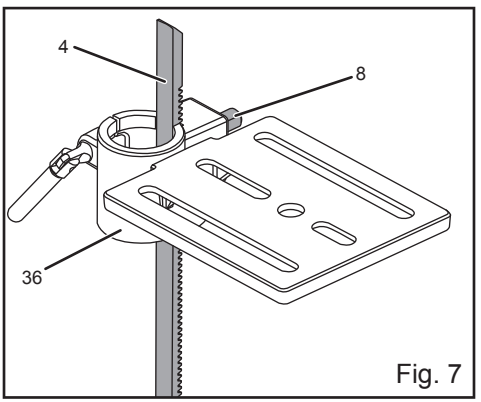

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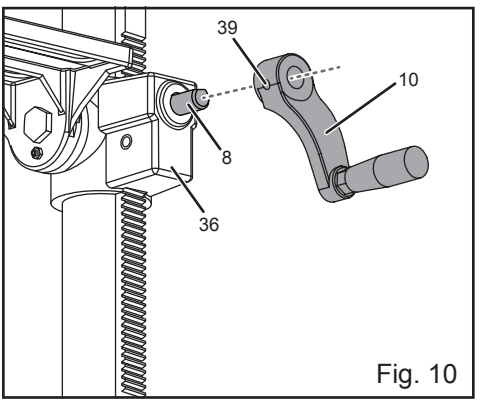

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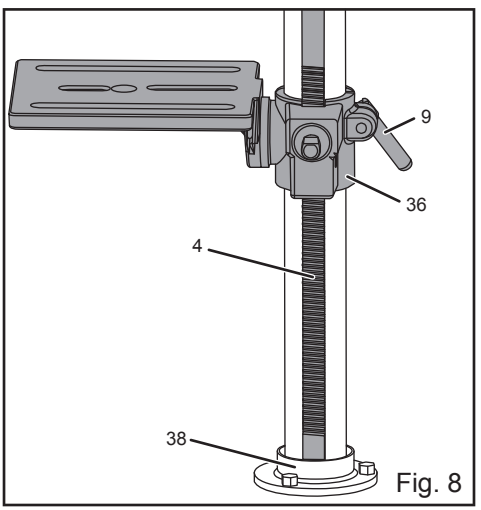

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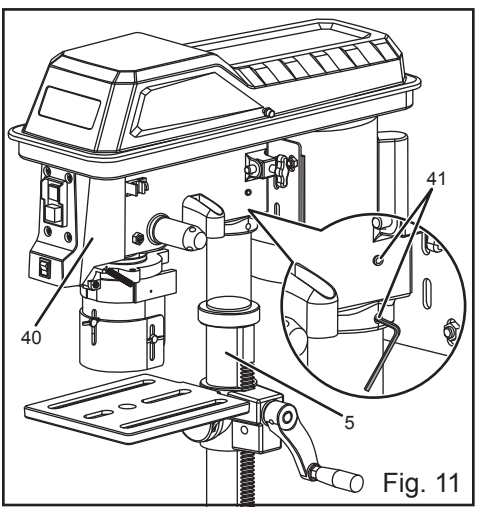

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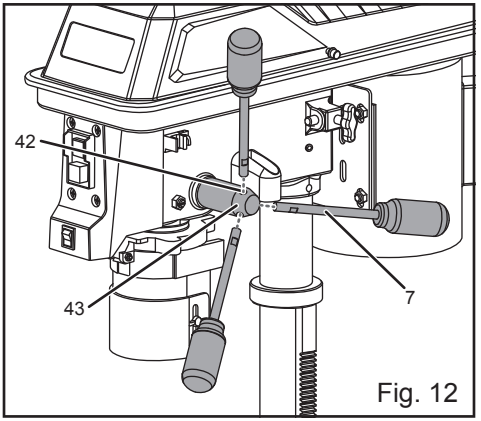

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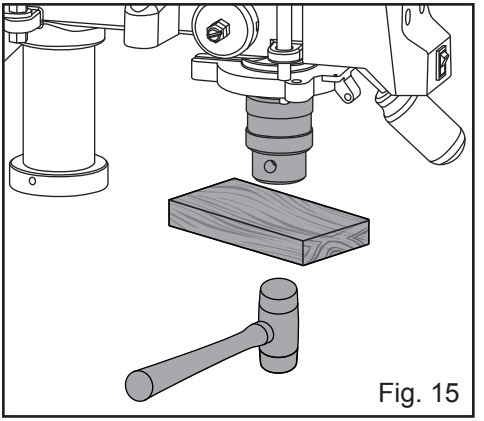
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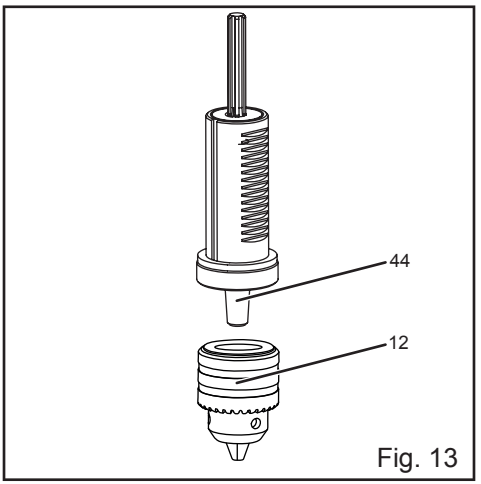

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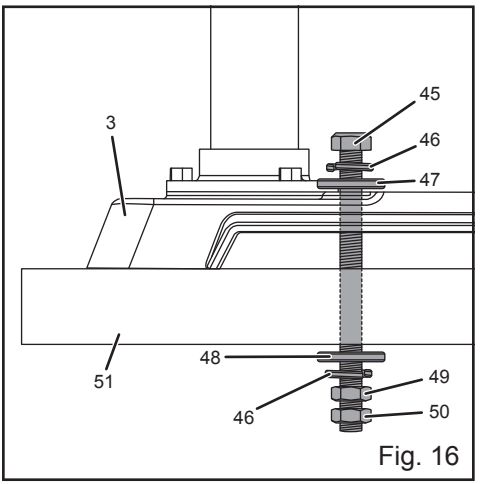
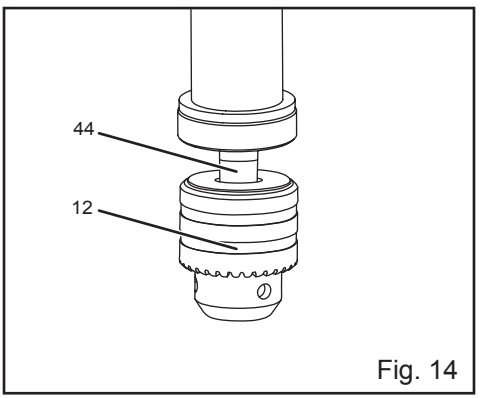


Fig. 16



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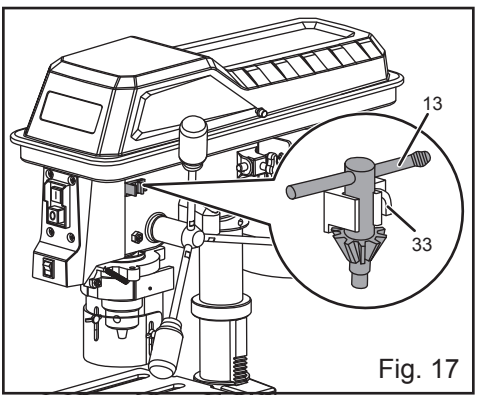

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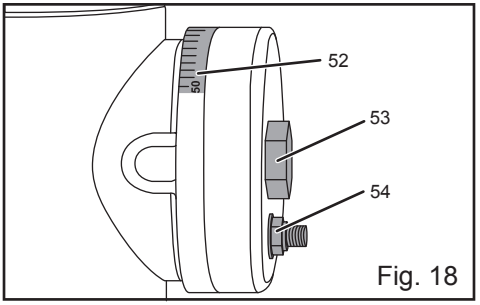

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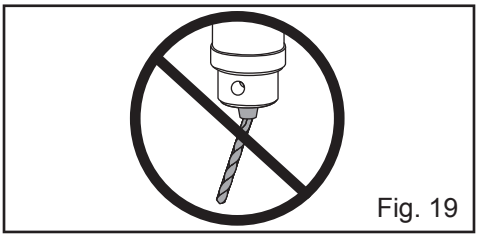
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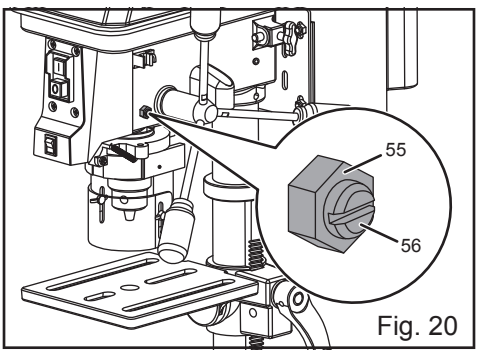

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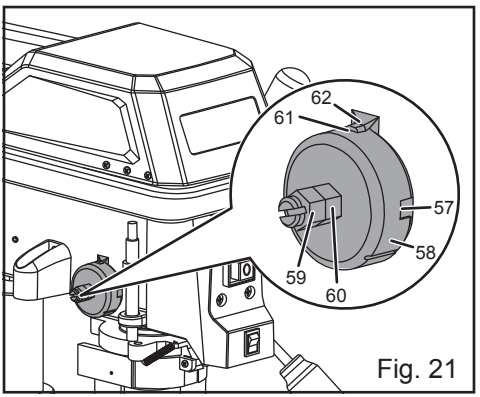

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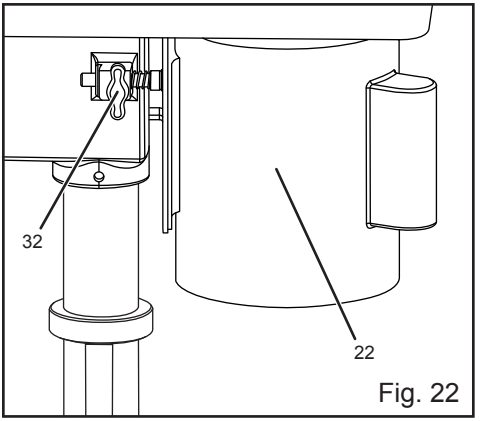

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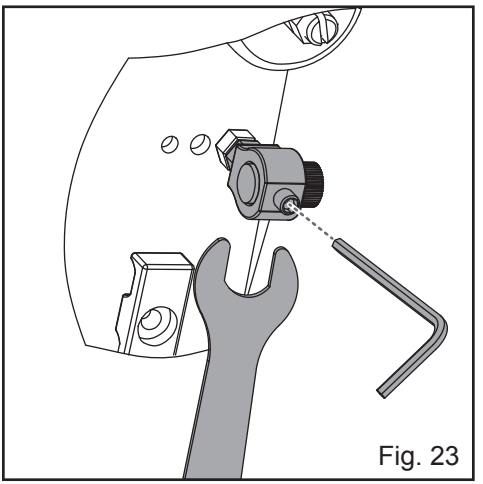
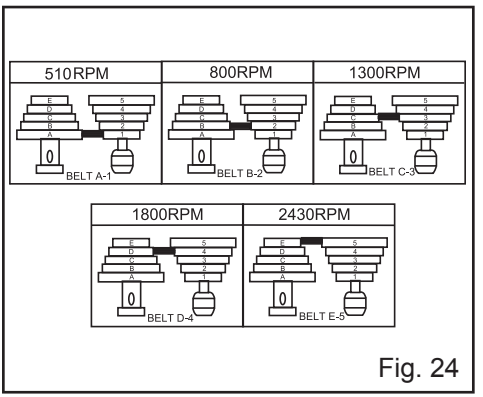


Fig. 23



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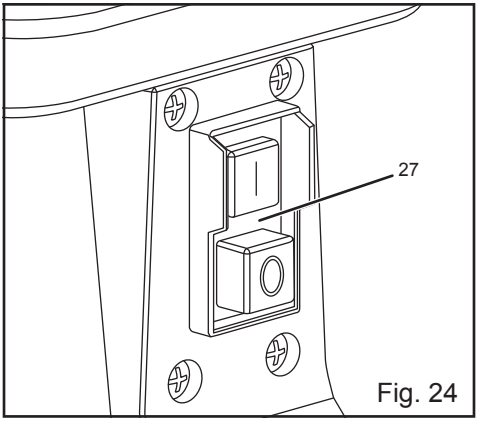

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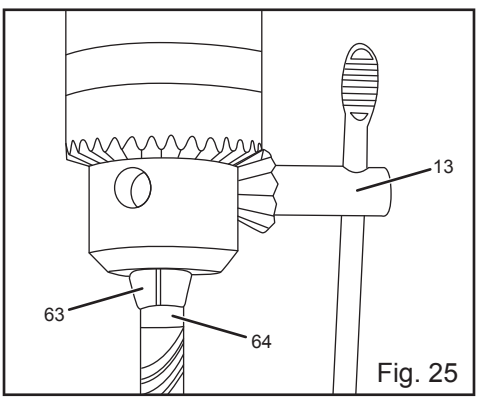

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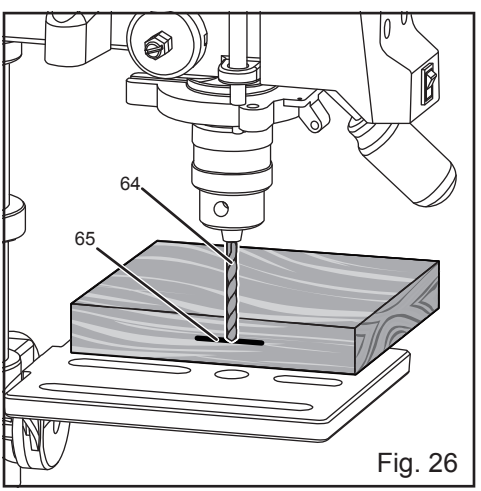

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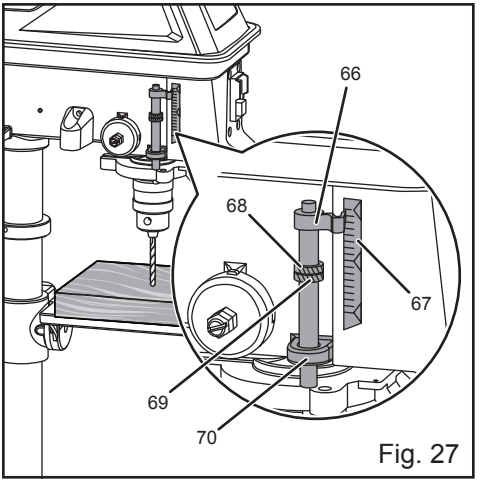

Fig. 27

DRILLING SPEED TABLE (RPM)			
Drill Bit Diameter (Inches)	Material		
	Wood	Alum., Zinc., Brass	Iron, Steel
1/16	2430	2430	2430
1/8			1800
3/16			1300
1/4		1800	
5/16			800
3/8		1300	
1/2	1800	800	510

Fig. 28

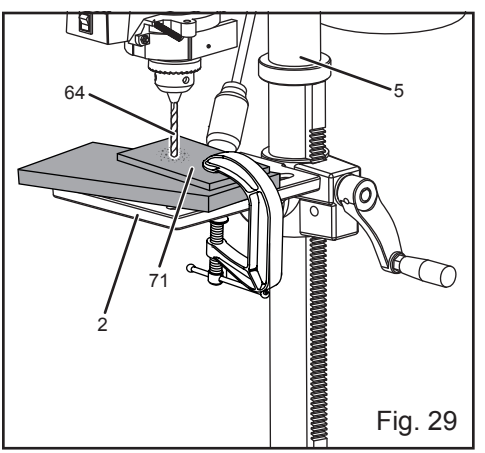

Fig. 29

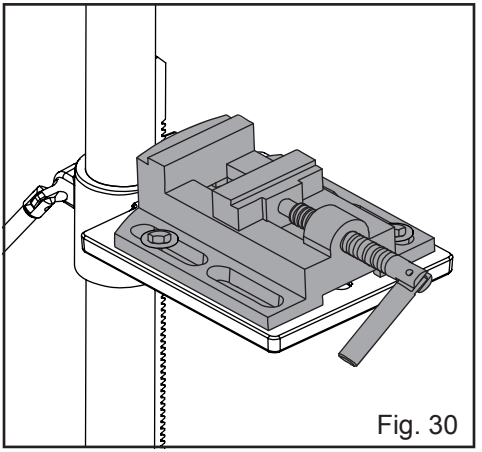

Fig. 30

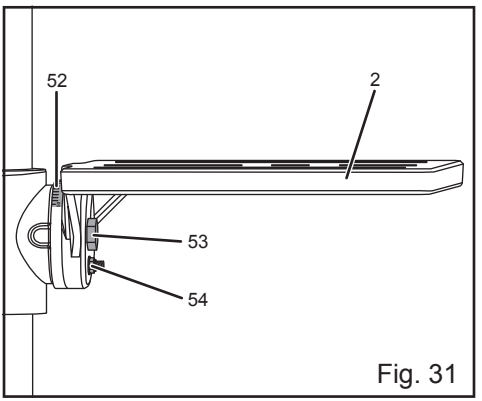

Fig. 31

Important!

It is essential that you read the instructions in this manual before operating this machine.

Subject to technical modifications.

GENERAL POWER TOOL SAFETY WARNINGS

⚠ WARNING

When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury.

Read all these instructions before attempting to operate this product and save these instructions.

- **Know your power tool.** Read the operator's manual carefully. Learn the applications and limitations as well as the specific potential hazards related to this tool.
- **Guard against electrical shock by preventing body contact with grounded surfaces.** For example: pipes, radiators, ranges, refrigerator enclosures.
- **Keep guards in place** and in good working order.
- **Remove adjusting keys and wrenches.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **Keep work area clean.** Cluttered areas and benches invite accidents. Do not leave tools or pieces of wood on the tool while it is in operation.
- **Do not use in dangerous environments.** Do not use power tools in damp or wet locations or expose to rain. Keep the work area well lit.
- **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, master switches, or by removing starter keys.
- **Don't force the tool.** It will do the job better and safer at the feed rate for which it was designed.
- **Use the right tool.** Do not force the tool or attachment to do a job for which it was not designed.
- **Dress properly.** Do not wear loose clothing, gloves, neckties, or jewelry that can get caught and draw you into moving parts. Rubber gloves and nonskid footwear are recommended when working outdoors. Also wear protective hair covering to contain long hair.
- **Always wear safety glasses with side shields.** Everyday eyeglasses have only impact-resistant lenses; they are not safety glasses.
- **Secure work.** Use clamps or a vice to hold work when practical, it is 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 tools.** When not in use, before servicing, or when changing attachments, blades, bits, cutters, etc., all tools should be disconnected from power source.
- **Avoid accidental starting.** Be sure switch is off when plugging in any tool.
- **Use recommended accessories.** Consult the operator's manual for recommended accessories. The use of improper accessories may result in injury.
- **Never stand on tool.** Serious injury could occur if the tool is tipped.
- **Check damaged parts.** Before further use of 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 its operation. A guard or other part that is damaged must be properly repaired or replaced by an authorised service centre to avoid risk of personal injury.
- **Use the right direction of feed.** Feed work into a blade, cutter, or sanding spindle against the direction or rotation of the blade, cutter, or sanding spindle only.
- **Never leave tool running unattended. Turn the power off.** Don't leave tool until it comes to a complete stop.
- **Protect your lungs.** Wear a face or dust mask if the drilling operation is dusty.
- **Protect your hearing.** Wear hearing protection during extended periods of operation.
- **Do not abuse cord.** Never carry tool by the cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
- **Use outdoor extension cords.** When tool is used outdoors, use only extension cords with approved ground connection that are intended for use outdoors and so marked.
- **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 authorised service centre.
- **Always turn switch off** before disconnecting it to avoid accidental starting.
- **Never use in an explosive atmosphere.** Normal sparking of the motor could ignite fumes.
- **Inspect tool cords periodically.** If damaged, have them repaired by a qualified service technician at an authorised service facility. 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. Repair or

replace a damaged or worn cord immediately. Stay constantly aware of cord location and keep it well away from the rotating blade.

- **Inspect extension cords periodically** and replace if damaged.
- **Ground all tools.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle.
- **Use only correct electrical devices:** 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
- **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.
- **Never start a tool when any rotating component is in contact with the workpiece.**
- **Do not operate a tool while under the influence of drugs, alcohol, or any medication.**
- **When servicing** use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.
- **Use only recommended accessories** listed in this manual or addendums. Use of accessories that are not listed may cause the risk of personal injury. Instructions for safe use of accessories are included with the accessory.

SPECIAL SAFETY RULES

- **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.
- **Always clamp workpiece or brace against column to prevent rotation.** Never use your hand to hold the object while drilling.
- **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.
- **Avoid direct eye exposure** when using the laser guide.
- **Always ensure the laser beam is aimed at a surface without reflective properties.** Shiny reflective materials are not suitable for laser use.
- **Never place your fingers in a position where they could contact the drill** or other cutting tool if the workpiece should unexpectedly shift.
- **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 support lock handle is clamped tight to column and head and table support collars are correctly positioned.
- **Before engaging the power switch, 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.
- **If the power supply cord is damaged,** it must be replaced only by the manufacturer or by an authorised service centre to avoid risk.
- **Store idle tools.** When not in use, tools should be stored in a dry locked-up place, out of reach of children.
- **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.

ELECTRICAL

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.

Before using an extension cord, inspect it for loose or

exposed wires and cut or worn insulation.

⚠ 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 a power tool. Failure to do so can result in serious personal injury.

⚠ WARNING

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

ELECTRICAL CONNECTION

This tool is powered by a precision built electric motor. It should be connected to a **power supply that is 230-240 V, 50 Hz, AC only (normal household current)**. Do not operate this tool on direct current (DC). A substantial voltage drop will cause a loss of power and the motor will overheat. If the tool does not operate when plugged into an outlet, double check the power supply.

SPEED AND WIRING

The no-load speed of this tool is approximately 2,850 rpm. This speed is not constant and decreases under a load or with lower voltage. For voltage, the wiring in a shop is as important as the motor's horsepower rating. A line intended only for lights cannot properly carry a power tool motor. Wire that is heavy enough for a short distance will be too light for a greater distance. A line that can support one power tool may not be able to support two or three tools.

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.

Repair or replace a damaged or worn cord immediately.

SPECIFICATIONS

Product Specifications	
Net weight	21.2 kg
Chuck size	13 mm (1/2")
Speed	5 (510-2430 min^{-1})
Motor	230-240 V, 50Hz
Horsepower	390 W
Table Size	195 mm x 165 mm (7-5/8" x 6-1/2")
Table tilt	45º right or left
Spindle travel	50 mm (2")
Throat	127 mm (5")
Laser	Class 2
Measured sound pressure level	L_{pA} = 57.5 dB(A)
Uncertainty K	3 dB(A)
Measured sound power level	L_{WA} = 70.5 dB(A)
Uncertainty K	3 dB(A)

RECOMMENDED ACCESSORIES

⚠ WARNING

Use only accessories recommend for this drill press.

Follow instructions that accompany accessories. Use of improper accessories may cause hazards.

- Drill bits
- Hold-down clamps
- Drill press vices

⚠ WARNING

Use only accessories designed for this drill press to avoid injury from thrown broken parts or workpieces.

Do not use any accessory unless you have completely read the instruction or operator's manual for that accessory.

CARTON CONTENTS

UNPACKING AND CHECKING CONTENTS

⚠ WARNING

If any part is missing or damaged, do not plug the drill press in until the missing or damaged part is replaced, and assembly is complete.

Carefully unpack the drill press and all its parts, and compare against the list below.

To protect the drill press from moisture, a protective coating has been applied to the machined surfaces. Remove this coating with a soft cloth moistened with kerosene or WD-40.

⚠ WARNING

To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner or similar highly volatile solvents to clean the drill press.

Apply a coat of paste wax to the table, column and machined surfaces of base to prevent rust. Wipe all parts thoroughly with a clean dry cloth.

Item	Description	Quantity
1	Head assembly	1
2	Table	1
3	Base	1
4	Rack	1
5	Column assembly	1
6	Rack ring	1
7	Feed handles	3
8	Worm gear	1
9	Table lock handle	1
10	Table crank handle	1
11	Hex bolts	3
12	Chuck	1
13	Chuck key	1
14	4 mm hex key	1
15	3 mm hex key	1

ASSEMBLY AND ADJUSTMENTS

⚠ WARNING

For your own safety, never connect plug to power source outlet until all assembly steps are complete and you have read and understood the safety and operating instructions.

⚠ WARNING

The drill press is a heavy power tool and should be lifted with the help of two people or more to safely assemble it.

ASSEMBLING COLUMN TO BASE

See Figure 5.

1. Place the base on a flat, stable surface.
2. Align screw holes in the column assembly with screw holes in the base.
3. Place a hex bolt in each hole.
4. Tighten each hex bolt using an adjustable wrench.

INSTALLING TABLE TO COLUMN ASSEMBLY

See Figures 6-10.

1. Insert the table bracket lock handle into the threaded hole at the rear of the table bracket.
   NOTE: Install the handle from left to right, so it enters the non-threaded side of the table bracket first.
2. Feed the worm gear through the table crank hole in the table bracket. Make sure the worm gear meshes with the inside gear.
   NOTE: Do not remove the lubrication from the worm gear.
3. Feed the rack through the slot in the table bracket so that the teeth are facing out and the longer smooth end faces up. The worm gear should engage the rack.
4. Using both hands, slide the entire table and rack onto the column until the bottom of the rack is positioned in the base collar and against the column.
5. Tighten the table bracket lock handle to lock the table assembly to the column.
   NOTE: Do not overtighten.
6. Slide the rack ring, bevel-side down, over the column until the beveled side engages the beveled end of the rack.
7. Tighten the set screw in the collar using the hex key. To avoid column or collar damage, do not overtighten the set screw.
   NOTE: You should be able to move the table from side to side.
8. Install table crank handle over the end of worm gear so that the flat side of the shaft aligns with the set screw.
9. Tighten the set screw using the hex key.

INSTALLING THE HEAD

See Figure 11.

⚠ WARNING

The Drill Press head is heavy and should be lifted with the help of two people to safely assemble the drill press head on the column.

1. Position the head onto the column with the chuck positioned over the table.
   NOTE: This tool is heavy. Get help when needed.
2. Slide the head down as far as it will go. Align the table assembly with the base and then tighten the two head set screws with the hex key.

INSTALLING FEED HANDLES

See Figure 12.

1. Attach the three feed handles by screwing them into the threaded holes in the hub assembly.

INSTALLING THE CHUCK

See Figures 13-15.

⚠ WARNING

Before any assembly of the chuck to the drill press head, clean all mating surfaces with a non-petroleum based product. Any oil or grease used in the packing of these parts must be removed otherwise the chuck may come loose during operation.

1. Clean out the tapered hole in the chuck with a clean cloth and a non-alcohol based cleaner. Wipe clean all oil residue and any dirt or grime thoroughly.
2. Clean tapered surfaces on the spindle in the same manner as above.
   NOTE: Make sure there are no foreign particles sticking to the surfaces. The slightest piece of dirt or oil residing on any of these surfaces will prevent the chuck from seating properly. This will cause the drill chuck and bit to wobble.
3. Position chuck on spindle. Chuck should be fully opened to avoid damaging jaws.
4. Unlock the table support lock and swing the table away from the bottom of the chuck.
5. Insert the chuck onto the spindle, pushing upwards all the way.
6. Using a piece of scrap wood to protect the chuck, firmly tap the chuck into place using a mallet or hammer.

⚠ CAUTION

Risk of property damage. To avoid damage to the chuck, never drive the chuck on the spindle with a metal hammer.

REMOVING THE CHUCK

1. Turn the feed handles to lower the chuck to the lowest position.
2. Place a ball joint separator (not shown) above the chuck and tap it lightly with a hammer or rubber mallet to cause the chuck to drop from the spindle.
   NOTE: Never hit the chuck directly with the hammer or rubber mallet.

NOTE: To avoid possible damage to the chuck, raise the jaws all the way first and be prepared to catch the chuck as it falls.

MOUNTING DRILL PRESS TO WORK SURFACE

See Figure 16.

If the drill press is to be used in a permanent location, secure it to a workbench or other stable surface.

If the 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 19 mm (3/4") thickness is recommended.

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

Once the drill press is securely mounted on a sturdy surface:

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

CHUCK KEY STORAGE

See Figure 17.

Storage holder for the chuck key is located on the right side of the drill press.

BEVEL DRILLING

See Figure 18.

NOTE: A bevel scale has been included to measure approximate bevel angles. If precision is necessary, a square or other measuring tool should be used to position the table. To use the bevel scale:

1. Tighten the nut on the locking pin using a 10 mm or adjustable wrench clockwise to release the pin from its table support. This pin will be needed when placing the table back to its 0 degree setting from the table support. Do not throw away.
2. Loosen the large hex head table bevel locking bolt using a 17 mm or adjustable wrench.
3. Tilt the table, aligning the desired angle measurement to the zero line opposite the scale.
4. Tighten the table bevel locking bolt.
5. To return the table to its original position, loosen the cable bevel locking bolt. Return the table to the 0° position.
6. Return nut on locking pin to the outside end of threads. Gently tap locking pin, using a rubber mallet, until it is seated in the mating hole of the table bracket. Hand tighten nut.
   NOTE: The table has been removed from the illustration for clarity.

⚠ WARNING

To prevent personal injury, always disconnect the plug from the power source when making any adjustments.

SPINDLE / QUILL

See Figure 20.

Rotate the feed handles counterclockwise to lower spindle to its lowest position. Hold the chuck and move it front to back. If there is excessive play, proceed with the following adjustments:

1. Loosen the lock nut located on the right side of the drill press, using a 10 mm wrench.
2. Turn the screw clockwise to eliminate the play, using a slotted screwdriver, but without obstructing the upward movement of the spindle. (A little play in the spindle is normal.)
3. Tighten the lock nut.

QUILL RETURN SPRING

See Figure 21.

The quill return spring may need adjustment if the quill return speed is too rapid or too slow. This spring is located on the left side of the drill head.

1. Lower the table for additional clearance.
2. Place a screwdriver in the lower front notch of the spring cap. Hold it in place while loosening and removing only the outer jam nut, using a 10 mm wrench.
3. With the screwdriver still engaged in the notch, loosen the inner nut just until the notch disengages from the boss on the drill press head.
   NOTE: Do not remove this inner nut, because the spring will forcibly unwind.
4. Carefully turn the spring cap counterclockwise with the screwdriver, engaging the next notch.
5. Lower the quill to the lowest position by rotating the feed handle in a counterclockwise direction while holding the spring cap in position.
6. If the quill moves up and down as you desire, tighten the inner nut sung against the spring cap and spring cap with the wrench. If too loose, repeat steps 3 through 5 to tighten. If too tight, reverse steps 4 and 5.
7. Secure the outer nut against the inner nut with the wrench.

NOTE: Do not overtighten and restrict quill movement.

BELT TENSION

See Figure 22.

1. Open the pulley cover.
2. To unlock the belt tension, turn the belt tension lock knob on the right side of the drill press head counterclockwise.
3. Pull the motor toward the front of the drill press to loosen the belt tension.
4. Position the belt on the correct pulley steps for the desired speed.
5. Push the motor away from the drill press head until the belt is properly tensioned.
   NOTE: Belt tension is correct if the belt deflects approximately 13 mm (1/2") when pressed at its centre.
6. Tighten the belt tension lock knob to secure the motor in position. Close pulley cover.

CHECKING/ADJUSTING LASER ALIGNMENT

Your tool is equipped with Laser Trac ®.

The laser beams will enable you to preview the drill bit path on the workpiece to be drilled before you begin your operation.

⚠ WARNING

Avoid direct eye contact

A laser light is radiated when the laser guide is turned on. Avoid direct eye contact. Always unplug the drill press from the power source before making any adjustments.

- A laser pointer is not a toy and should not come into hands of children. Misuse of this appliance can lead to irreparable eye injuries.
- Any adjustment to increase the laser power is forbidden.
- When using the laser pointer, do not point the laser beam towards people and/or reflecting surfaces. Even a laser beam of lower intensity may cause eye

damage. Therefore, do not look directly into the laser beam.

- If the laser pointer is stored for more than 3 months without use, please remove the batteries to avoid damage from possibly leaking batteries.
- The laser pointer includes no servicing components. Never open the housing for repair or adjustments.
- Laser warning label:

- Do not remove or deface warning labels. Removing labels increases the risk of exposure to radiation.
- CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- Do not attempt to repair or disassemble the laser level. If unqualified persons attempt to repair this laser product, serious injury may result. Any repair required on this laser product should be performed by authorised service centre personnel.
- CAUTION: The use of optical instruments with this product will increase eye hazard.

⚠ WARNING

Do not use tinted glasses to enhance the laser light. Tinted glasses will reduce the overall vision for the application and interfere with the normal operation of the tool.

⚠ WARNING

Laser radiation. Never aim the beam at a work piece with a reflective surface. Bright shiny reflective sheet steel or similar reflective surfaces are not recommended for laser use. Reflective surfaces could direct the beam back toward the operator or bystanders.

ADJUSTING THE LASER LINES

See Figure 23.

Check the laser alignment to ensure the intersection of the laser lines is precisely at the spot where the drill bit meets the workpiece. If it is not, the laser lines should be adjusted using the laser adjustment knobs located on opposite sides of the head assembly.

1. Mark an “X” on a piece of scrap wood.
2. Insert a small drill bit into the chuck and align its tip to *the intersection of the lines of the “X”.*
3. Secure the board to the table.
4. Turn on the laser guide and verify the laser lines align with the “X” on the workpiece.
5. If the laser lines do not align, loosen the set screws on each of the laser housings with a hex key and rotate the laser adjustment knobs until the lines meet in the centre of the “X”. Retighten the set screws to secure.

OPERATION

⚠ WARNING

Do not allow familiarity with tools to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

⚠ WARNING

Always wear safety goggles or safety glasses with side shields when operating power tools. Failure to do so could result in objects being thrown into your eyes resulting in possible serious injury.

⚠ WARNING

Do not use any attachments or accessories not recommended by the manufacturer of this tool. The use of attachments or accessories not recommended can result in serious personal injury.

⚠ WARNING

To avoid possible injury, keep guard closed and in place while tool is in operation.

CHANGING SPEEDS AND BELT PLACEMENT

See Figure 24.

The spindle speed is determined by the location of the belt 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:

1. Lift pulley cover.
2. Loosen the tension bolt.
3. Remove the belt.
4. Reposition the belt according to the speed chart.
5. Retighten the tension bolt.

NOTE: See the Drilling Speed Table (RPM) (Figure 28) for size of drill bit and material drilling recommendations.

ON/OFF switch

See Figure 25.

To turn the drill press on:

1. Press the ON button (I).

To turn the drill press off:

1. Press the OFF button (O).

⚠ WARNING

Always make sure the workpiece is not in contact with the bit before operating the switch to start the tool. Failure to heed this warning may cause the workpiece to be kicked back toward the operator and result in serious personal injury.

INSTALLING AND REMOVING BITS

See Figure 26.

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

⚠ WARNING

Do not insert drill bit into chuck jaws and tighten as shown in Figure 19. This could cause drill bit to be thrown from the drill press, resulting in possible serious personal injury or damage to the chuck.

4. Tighten chuck jaws securely using chuck key provided. Do not use a wrench to tighten or loosen chuck jaws.
5. Remove chuck key.
6. To remove the drill bit, reverse the steps listed above.

⚠ WARNING

To avoid injury or accident by the chuck key ejecting forcibly from the chuck when the power is turned “ON”, use only the self-ejecting chuck key supplied with this drill press. Always recheck and remove the chuck key before turning the power “ON”. Place the chuck key into its storage holder when not in use.

DRILLING TO A SPECIFIC DEPTH

Drilling a blind hole (not all the way through workpiece) to a given depth can be done two ways:

Workpiece method

See Figure 27.

1. Mark the depth of the hole on the side of the workpiece.
2. With the switch “OFF”, bring the drill bit down until the tip is even with the mark.
3. Hold the feed handle at this position.
4. Spin the lower nut down to contact the depth stop lug on the head.
5. Spin the upper nut down and tighten against the lower nut.
6. The drill bit will now stop after traveling the distance marked on the workpiece.

Depth scale method

See Figure 28.

NOTE: With the chuck in the upper position, the tip of the drill bit must be just slightly above the top of the workpiece.

1. With the switch “OFF”, turn the feed handle until the pointer points to the desired depth on the depth scale and hold the feed handle in that position.
2. Spin the lower nut down to contact the depth stop lug.
3. Spin the upper nut against the lower stop nut and tighten.
4. The drill bit will stop after traveling the distance selected on the depth scale.

Drilling a hole

1. Using a centre punch or a sharp nail, make an indentation in the workpiece where you want to drill.
2. Turn on the laser guide and align the laser lines with the indentation.
3. Turn the power switch on and pull down on the feed handles with only enough effort to allow the drill to cut.

Feeding too rapidly might cause the belt or drill to slip, tear the workpiece loose, or break the drill bit.

When drilling metal, it will be necessary to lubricate the tip of the drill bit with metal drilling oil to prevent it from overheating.

BASIC OPERATING INSTRUCTIONS

To get the best results and minimize the likelihood of personal injury, follow these instructions for operating your drill press.

⚠ WARNING

For your own safety, always read the safety instructions listed within this operator’s manual.

FOR YOUR PROTECTION

⚠ WARNING

To avoid being pulled into the power tool, do not wear loose clothing, gloves, neckties, or jewellery. Always tie back long hair.

1. If any part of your drill press is missing, malfunctioning, damaged or broken, stop operation immediately until that part is properly repaired or replaced.
2. Never place your fingers in a position where they could contact the drill bit or other cutting tool. The workpiece may unexpectedly shift, or your hand could slip.
3. To prevent the workpiece from being torn from your hands, thrown, spun by the tool, or shattered, always properly support your workpiece as follows:
   - Always position backup material (used beneath

workpiece) so that it contacts the left side of the column.

- Whenever possible, position the workpiece to contact the left side of the column. If it is too short or the table is tilted, clamp solidly to the table, using the table slots.
- When using a drill press vice (not included), always fasten it to the table.
- Never do any work freehand (hand-holding the workpiece rather than supporting it on the table), except when polishing or sanding.
- Securely lock the head and support to the column, the table arm to the support, and the table to the table arm, before operating the drill press.
- Never move the head or the table while the tool is running.
- Before starting an operation, jog the motor switch to make sure the drill or other cutting tool does not wobble or cause vibration.
- If a workpiece overhangs the table so it will fall or tip if not held, clamp it to the table or provide auxiliary support.
- Use fixtures for unusual operations to adequately hold, guide, and position workpiece.
- Use the spindle speed recommended for the specific operation and workpiece material. Check the panel on the inside pulley cover or see Figure 29 for drilling speed information. For accessories, refer to the instructions provided with each accessory.

4. Never climb on the drill press table, it could break or pull the entire drill press down on you.
5. Turn the power “OFF” at the outlet when leaving the drill press.
6. To avoid injury from thrown work or tool contact, do not perform layout, assembly, or setup work on the table while the cutting tool is rotating.

POSITIONING THE TABLE AND WORKPIECE

See Figures 30-31.

1. Lock the table to the column at a position so the tip of the drill bit is just above the top of the workpiece.
2. Always place a back-up material (scrap wood) on the table beneath the workpiece. This will prevent splintering or heavy burring on the underside of the workpiece. To keep the back-up material from spinning, it must be positioned against the left side of the column.
3. For a small piece that cannot be clamped to the table, use a drill press vice (optional accessory, not included).

⚠ WARNING

To prevent the workpiece or backup material from being thrown while drilling, you MUST position the workpiece against the left side of the column. If the workpiece or the backup material is not long enough to reach the column, clamp them to the table to brace the workpiece. Failure to secure the workpiece could result in personal injury.

⚠ WARNING

A drill press vice must be clamped or bolted to the table to avoid injury from a spinning workpiece, or damaged vice or bit parts.

HOLDING A DRILLING LOCATION

1. Using a centre punch or sharp nail, make an indentation in the workpiece where you will be drilling.
2. Turn on the laser guide and align the laser lines (x) with the indentation before turning the drill ON.

TILTING THE TABLE

See Figure 32.

NOTE: The table support has a predrilled hole with a locking pin inserted for locking the table into a predrilled 0° bevel angle.

1. Tighten the nut on the locking pin using a 10 mm or adjustable wrench clockwise to release the pin from the table support. This pin will be needed when placing the table back to its 0 degree setting from the table support.
2. Loosen the large hex head table bevel locking bolt using a 17 mm or adjustable wrench.

⚠ WARNING

To prevent injury, be sure to hold the table and table arm assembly, so it will not swivel or tilt.

3. Tilt the table, aligning the desired angle measurement to the zero line opposite the scale.
4. Tighten the table bevel locking bolt.
5. To return the table to its original position, loosen the table bevel locking bolt. Return the table to the 0° position.
6. Return nut on locking pin to the outside end of threads. Gently tap locking pin until it is seated in the mating hole of the table bracket. Hand tighten nut.

⚠ WARNING

To avoid injury from spinning work or tool breakage, always clamp workpiece and backup material securely to the table before operating the drill press.

FEEDING

1. Pull down the feed handles with only enough effort to allow the drill bit to cut.
2. Feeding too slowly might cause the drill bit to burn. Feeding too rapidly might cause the belt or drill to slip, tear the workpiece loose or break the drill bit.
3. When drilling metal, it is necessary to lubricate the drill bit tip with oil to prevent burning of the workpiece and bit.

MAINTENANCE

⚠ WARNING

For your own safety, turn the switch OFF and remove the plug from the power source outlet before maintaining or lubricating your drill press.

Frequently blow out, using an air compressor or dust vacuum, any sawdust or metal chips that accumulate inside the motor, pulley housing, table and work surface. Always wear protective safety goggles.

⚠ WARNING

To avoid shock or fire hazard, if the power cord is worn or cut in any way, have it replaced immediately by a qualified electrician or service technician.

LUBRICATION

All of the drill press ball bearings are packed with grease at the factory. They require no further lubrication.

Periodically lubricate the gear and rack, table elevation mechanism of the spindle the rack (teeth) of the quill. Lower the spindle down and oil the spindle sleeve moderately every three months.

ENVIRONMENTAL PROTECTION

Recycle raw materials instead of disposing of as waste. The machine, accessories and packaging should be sorted for environmental-friendly recycling.

SYMBOL

Safety alert

Regulatory Compliance Mark (RCM). Product meets applicable regulatory requirements.

Please read the instructions carefully before starting the product.

Laser radiation. Do not stare into beam.

Do not expose to rain or use in damp locations.

Wear ear protection

Always wear eye protection

Chuck Capacity

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Noisy operation.	1. Incorrect belt tension. 2. Spindle is dry. 3. Spindle pulley is loose. 4. Motor pulley is loose.	1. Adjust the tension. See section “Assembly-Belt tension”. 2. Lubricate the spindle. See section “Maintenance-Lubrication”. 3. Check tightness of the retaining nut on pulley, and tighten if necessary. 4. Tighten the set screw in motor pulley.
Drill bit burns.	1. Incorrect speed. 2. Chips not coming out of hole. 3. Drill bit is dull. 4. Feeding is too slow. 5. Not lubricated.	1. Change speed. See section “Basic drill press operation-changing speeds and belt replacement". 2. Retract drill frequently to clear chips. 3. Resharpen the drill bit or replace with new bit. 4. Feed fast enough – allow drill to cut. 5. Lubricate drill. See section “Basic drill press operation-feeding”.
Run out of drill bit point-drilled hole not round.	1. Hard grain in wood or lengths of cutting routes and/or angles not equal. 2. Drill bit is bent.	1. Resharpen the drill bit correctly. 2. Replace the drill bit.
Wood splinters on underside.	1. No backup material under workpiece.	1. Use backup material. See section “Basic drill press operation-basic operating instructions”.
Workpiece torn loose from hand.	1. Workpiece is not supported or clamped properly.	1. Support the workpiece or clamp it. See section “Basic drill press operation-basic operating instructions”.
Drill bit binds in workpiece.	1. Workpiece pinching drill bit, or excessive feed pressure. 2. Improper belt tension.	1. Support the workpiece or clamp it. See section “Basic drill press operation-basic operating instructions”. 2. Adjust tension. See section ”Assembly-Belt tension”.
Excessive drill bit runout or wobble.	1. Drill bit is bent. 2. Bearings are worn. 3. Drill bit not properly installed in chuck. 4. Chuck not properly installed.	1. Use a straight drill bit. 2. Replace the bearings. 3. Install drill properly. See section “Basic drill press operation” and “Assembly”. 4. Install chuck properly. See section “Assembly – installing the chuck”.
Quill returns too slow or too fast.	1. Coil spring has improper tension.	1. Adjust spring tension. See section “Assembly – adjustments –quill return spring”.
Chuck will not stay attached to spindle. It falls off when trying to install.	1. Dirt, grease, or oil on the tapered inside surface of chuck or on the spindle’s tapered surface.	1. Using a non-alcohol based cleaner, clean the tapered surface of the chuck and spindle to remove all dirt, grease and oil. See section “Assembly – installing the chuck”.

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