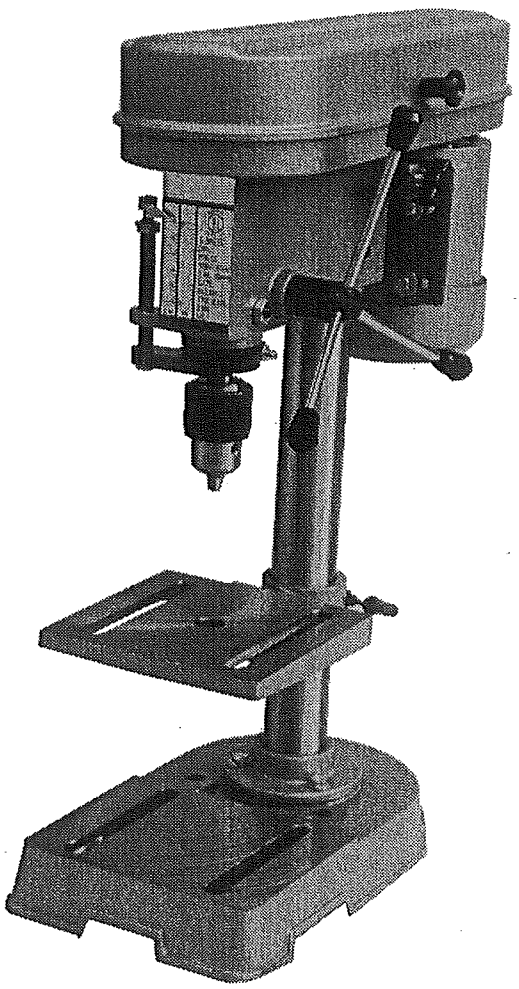
5 SPEED MINI DRILL PRESS

INSTRUCTION MANUAL

MODEL NO.ZJ4113



CAREFULLY READ THE INSTRUCTIONS BEFORE YOU USE THE DRILL PRESS.

DPMINI5OL

Made in China

GENERAL SAFETY RULES

WARNING: READ ALL INSTRUCTONS. Failure to follow the SAFETY RULES listed BELOW, and other basic safety precautions, may result in serious personal injury.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better, and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
9. USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one 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. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
10. WERA PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant licenses, they are NOT safety glasses.
12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. DON'T OVERREACH. Keep proper footing and balance at all time.
14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. DISCONNECT TOOLS before servicing: when changing accessories, such

as blades, bits, cutters, and the like.

16. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.
17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. 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 should be properly repaired or replaced.
20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

SAFETY INSTRUCTION FOR DRILL PRESS

Safety is a combination of common sense, staying alert and knowing how your drill press works. Read this manual to understand this drill press.

When Installing or Moving The Drill Press

Reduce the Risk of Dangerous Environment.

- Use the drill press in a dry, indoor place protected from rain.
- Keep work area well lighted.
- Use recommended accessories. The use of improper accessories may cause risk of injury to persons.

To reduce the risk of injury from unexpected drill press movement.

If there is any tendency of the drill press to tilt or move during any use, bolt it to the floor. Make sure and leave adequate room to fully open the belt guard. If the workpiece is too large to easily support with one hand, provide an auxiliary support.

- To reduce the risk of injury from electrical shock, make sure your fingers do not touch the plug's metal prongs when plugging in or unplugging the drill press.
- **Never Stand On Tool.** Serious injury could occur if the tool tips or you accidentally hit the cutting tool. Do not store anything above or near the tool where anyone might stand on the tool to reach them.

Before Each Use

Inspect your drill press.

- To reduce the risk of injury from accidental starting, turn the switch off, unplug the drill press, and remove the switch key before raising the guard, changing the cutting tool, changing the setup, or adjusting anything. Make sure switch is in OFF position before plugging in.
- Check for alignment of moving parts, binding of moving parts, breakage of parts, drill press stability, and any other conditions that may affect the way the drill press works.
- If any part is missing, bent or broken in any way, or any electrical part does not work properly, turn the drill press off and unplug the drill press.
- Replace damaged or missing parts before using the drill press again.
- Remove adjusting keys and wrenches. Form a habit of checking for and removing keys and adjusting wrenches from table top before turning drill press on.
- Make sure all clamps and locks are tight and no parts have excessive play.

Use Only Accessories Designed For This Drill Press To Reduce The Risk of Serious Injury From Thrown Broken Parts Or Work Pieces

- When cutting large diameter holes:
  - Clamp the workpiece firmly to the table. Otherwise the cutting may grab and spin it at high speed.
  - Use only one piece, cup-type, hole cutters.
  - **Do not** use fly cutters or multi-part hole cutters as they can come apart or become unbalance in use.
  - Keep speed below 1500rpm.
- Drum sanders must **never** be operated on this drill press at a speed greater than 1800rpm.
- Do not install or use any drill that exceed 7" in length or extends 6" below the chuck jaws. They can suddenly bend outward or break.
- Do not use wire wheels, router bits, shaper cutters, circle (fly) cutters or rotary planers on this drill press.

Kickback

- Kickback is the grabbing of the workpiece by the rotating tool. The workpiece can be thrown at a very high speed in the direction of rotation. **This Can Cause Serious Injury**. To reduce the possibility of injury from kickback:
  - Clamp the workpiece firmly to the table whenever possible.
  - Buffing or sanding wheels or drums should be contacted on the side moving away from you, not the side moving toward you.
  - Use only recommended accessories and follow the instructions supplied with the accessory.

This drill press has 5 speeds as listed below:

760 RPM
1150 RPM
1630 RPM
2180 RPM
3070 RPM

See inside of guard for specific placement of belt on pulleys.

Think Safety

Safety is a combination of operator common sense and alertness at all times when the drill press is being used.

WARNING: Do not allow familiarity (gained from frequent use of your drill press) to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.

Plan Your Work

- Don't force the tool. It will do the job better and safer at the rate for which it was designed.
- Use the right tool. Don't force tool or attachment to do a job it was not designed to do.
- If any part of your drill press is missing, malfunctioning, has been damaged or broken...such as the motor switch, or other operating control, a safety device or the power cord, turn the drill press off and unplug it until the particular 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 or your hand should slip.
- To reduce the risk of injury from parts thrown by the spring, follow instructions exactly as given and shown in adjusting spring tension of quill.
- To prevent the workpiece from being torn from your hands, spinning of the tool, shattering the tool or being thrown, always properly support your work so it won't shift or bind on the tool:
  - Always position backup material (use beneath the workpiece) to contact the left side of the column.
  - Whenever possible, position the workpiece to contact the left side of the column – If it is too short to the table. Use table slots or clamping ledge around the outside edge of the table.
  - When using a drill press vise, always fasten it to a table.
  - Never do any work "Freehand" (hand holding workpiece rather than supporting it on the table), except when polishing.
  - Securely lock head to column, table support to column and table to table support before operating drill press.
  - Never move the head or table while the tool is running.

- Before starting the 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 such that 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 inside of the belt guard for drilling information; for accessories, refer to the instructions provided with the accessories.

- Never climb on the drill press table, it could break or pull the entire drill press down on you.
- Turn the motor switch off and put away the switch key when leaving the drill press.
- To reduce the risk of injury from thrown work or tool contact, do not perform layout, assembly or setup work on the table while the cutting tool is rotating.
- Don't overreach. Keep proper footing and balance at all times.
- Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

Plan Ahead To Protect Your Eyes, Hands, Face and Ears

Dress for safety

- Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches). They can get caught and draw you into moving parts.
- Wear non-slip footwear.
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To reduce the risk of possible hearing damage, wear ear plugs or muffs when using drill press for hours at a time.
- Any power tool can throw foreign objects into the eyes. This can result in permanent eye damage. Everyday eyeglasses have only impact resistant lenses. They art not safety glasses.
- For dusty operations, wear a dust mask along with safety goggles.

Reduce the Risk of Accidental Starting.

- Make sure switch is "OFF" before plugging drill press into a power outlet.

WARNING: Don't allow familiarity (gained from frequent use of your drill press) to cause a careless mistake. Always remember that a careless fraction of a second is enough to cause a severe injury.

Keep Children Away

- Keep all visitor a safe distance from the drill press.
- Make sure bystanders are clear of the drill press and workpiece.

Before Leaving The Drill Press

- Turn the drill press off.
- Wait for tool bit to stop spinning.
- Unplug the drill press.
- Make workshop child-proof. Lock the shop. Disconnect master switches. Remove the yellow switch key. Store it away from children and others not qualified to use the tool.

Electrical Requirements

General Electrical Connections

DANGER: To reduce the risk of electrocution:

1. **Use only identical replacement parts when servicing. Servicing should be performed by a qualified service technician.**
2. **Do not use in rain or where floor is wet.**
   This tool is intended for indoor residential use only.

WARNING: Do not permit fingers to touch the terminals of plug when installing or removing the plug to or from the outlet.

110-120 Volt, 60Hz. Tool Information

NOTE: The plug supplied on your tool may not fit into the outlet you are planning to use. Your local electrical code may require slightly different power cord plug connections. If these differences exist refer to and make the proper adjustments per your local code before your tool is plugged in and turned on. 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, as shown. 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.

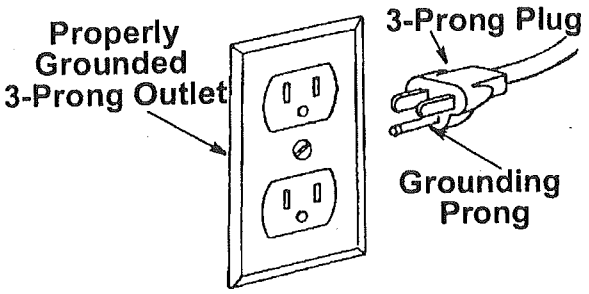
A temporary adapter may be used to connect this plug to a 2-prong outlet, as shown, if a properly grounded three prong outlet is not available. This temporary adapter should be used only until properly grounded three prong outlet can be installed by a qualified electrician. The green colored rigid ear, lug and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

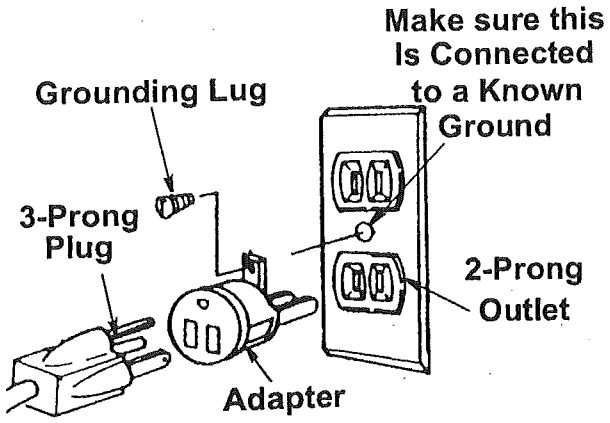
NOTE: In Canada the use of a temporary adapter is not permitted by the Canadian electrical code.

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.

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

WARNING: If not properly grounded, this tool can cause an electrical shock, particularly when used in damp locations, in proximity to plumbing, or out of doors. If an electrical shock occurs there is the potential of a secondary hazard, such as your hands to hit the cutting tool.





NOTE: The adapter illustrated is for use only if you already have a properly grounded 2-prong outlet.

NOTE: In Canada the use of a temporary adapter is not permitted by the Canadian Electrical Code.

Wire Sizes

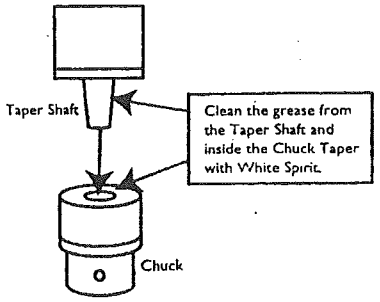
NOTE: Make sure the proper extension cord is used and is in good condition. The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burnout, use the table as below to determine the minimum wire size (A.W.G.) extension cord.

Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-pole receptacles which accept the tools plug.

Extension Cord Length	Gauge (A.W.G.)
0-25	16
25-50	14

ASSEMBLY OF DRILL PRESS

1. Secure column (5) to base (1) with 3 X bolt (3,4)
2. Slide the clamping sleeve (10) complete with work table (9) over the column and secure with clamping lever (6).
3. Slide the drill body assembly over the top of the column, ensure that the body (11) is parallel with the base (1) and secure in place with the two headless set screws (17) using the hexagon key provided.
4. Screw handle (15) into the feed shaft (14) and fit knobs (16).
5. Screw the press fit chuck (71) onto the tapered spindle (70) using the following procedure:
   1) Clean grease from both chuck and spindle.
   2) Open the chuck jaws fully.
   3) Push chuck firmly onto the spindle.
   4) Put a piece of scrap wood onto the table to protect the nose of the chuck.
   5) Pull down the feed handle until the chuck makes contact with the wood.
   6)Press until the chuck is forced onto the spindle.



BASIC DRILL PRESS OPERATION

1. Please read the instruction manual carefully before operation to be familiar with the mechanism of the machine and functions of all parts.
2. Before operation, check first to see that table (9) is firmly clamped on the column (5) and the lift sleeve (68) is in the normal position.
3. When adjusting the position of the table (9), move the table (9) to required position after releasing the clamping lever (6), then fasten clamping lever (6) again.
4. Tilting of table (9) can be adjusted in vertical plane by loosening the bolt (7).

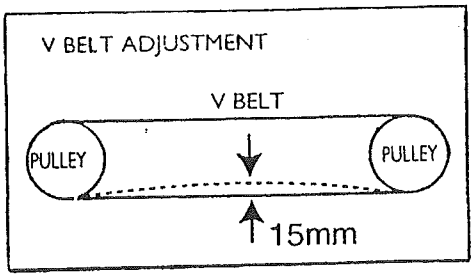
5. When adjusting drilling depth, loosen nut (49,50) first, bring the drill into contact with the surface of the workpiece then turn the scale to the position of drilling depth, fasten the nut (49, 50) again for operation as the procedures mentioned above have been completed.
6. Check spindle play adjustment set screw (12), is finger tight. Lock into position with (13) nut.

WARNING: Do not over tighten spindle, should be able to move up and down freely.

ADJUSTMENT OF SPEEDS

The spindle speeds can be adjusted by changing the position of V-belt (56) on the pulleys.

1. Release knob (18).
2. Pull motor towards the machine to release belt tension.
3. Move V-belt (56) to required position, see speed chart on the machine name plate.
4. Re-position motor allowing approx 15mm of play.
5. Re-tighten (18).



SPECIFICATIONS OF DRILL PRESS

Model No.	ZJ4113
Motor / Electrical	120V, AC, 1 Phase
Horse Power	0.4
Amperage	2.4
Chuck Size	1/2"
Number Speeds	5
Spindle Speed	760-3070RPM
Spindle Stroke	2"
Spindle Taper	MT2
Net Weight	42Lb

PARTS LIST

Part No.	Description	Q'ty	Part No.	Description	Q'ty
1	Base	1	37	Switch	1
2	Column Support	1	38	Screw	2
3	Washer	3	39	Fixed Plate	1
4	Bolt	3	40	Cable	1
5	Column	1	41	Plug	1
6	Clamping Lever	1	42	Plastic Clip	2
7	Bolt	1	43	Screw	2
8	Spring Washer	1	44	Nut	1
9	Working Table	1	45	Nut	1
10	Clamping Sleeve	1	46	Spring Set	1
11	Body	1	47	Spring Cap	1
12	Headless Set Screw	1	48	Pointer	1
13	Nut	1	49	Nut	1
14	Feed Shaft	1	50	Nut	1
15	Handle Bar	3	51	Limit Bolt	1
16	Knob	3	52	Heel Block	1
17	Headless Set Screw	2	53	Nut	1
18	Shifter Bar	1	54	Bolt	1
19	Spring	1	55	Nut	1
20	Slide Bar	1	56	V-Belt	1
21	Rubber Pad	1	57	Spindle Pulley	1
22	Bolt	1	58	Headless Set Screw	1
23	Washer	1	59	Retaining Ring	1
24	Motor Base	1	60	Internal Spine Sleeve	1
25	Washer	1	61	Retaining Ring	1
26	Bolt	1	62	Ball Bearing	1
27	Motor	1	63	Ball Bearing	1
28	Motor Pulley	1	64	Retaining Ring	1
29	Headless Set Screw	1	65	Retaining Ring	1
30	Washer	4	66	Ball Bearing	1
31	Screw	4	67	Collar	1
32	Screw	1	68	Spindle Sleeve	1
33	Washer	1	69	Ball Bearing	1
34	Knob	1	70	Spindle	1
35	Pulley Cover	1	71	Chuck	1
36	Washer	4			

EXPLODED VIEW