

KLUTCH™

10" Benchtop Drill Press

Owner's Manual



! WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #6963027

READ & SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Klutch® product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code (if applicable): _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This drill press is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

This drill press is designed for drilling large or small holes in metal, wood, plastic, and similar materials. It offers 5 adjustable speeds, an LED work light for clear visibility, and a laser crosshair for precise hole alignment, making it suitable for accurate and repetitive drilling tasks.

Packaging Contents

- | | | |
|--|----------------------------------|------------------------------|
| • Base (1) | • Worktable Bracket Assembly (1) | • Column Rack and Collar (1) |
| • Main housing (1) | • Chuck and key (1) | • Manual (1) |
| • Hardware Bag (Please refer to the list on the right for details) | Crank (1) | Hex Key (2) |
| | Bolt (3) | Lock handle (1) |
| | Handle (3) | Worm Gear (1) |

Technical Specifications

Property	Specification
Swing	10in.
Max. Chuck Capacity	1/2in.
Spindle Speeds	5 Speeds / 630-3300 RPM
Table Tilt L&R	-45°~0°~+45°
Motor Power	120V 60Hz 2/3HP
Base Size	13-3/8in. x 8-1/4in.
Spindle Travel	2in.
Cast Iron Table Size	7-1/2in. x 6 1/2in.

Important Safety Information

WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

WARNING

PROP 65

- This drill press can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to www.p65warnings.ca.gov.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:
 - - lead from lead-based paints,
 - - crystalline silica from bricks 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 dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.

⚠CAUTION

PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.

Specific Operation Warnings

⚠WARNING

- ALWAYS ensure that air can circulate around the machine and that the air vents are unobstructed.
- ALWAYS keep work area clean & tidy. Cluttered work areas and benches invite accidents.
- NEVER over-reach. Keep proper footing and balance at all times.
- NEVER store equipment in a wet/damp environment or expose to rain.
- KEEP other persons away. Do not let persons, especially children, not involved in the work, touch the tool or extension cable and keep them away from the work area.
- NEVER operate a machine when under the influence of alcohol, drugs or medication.
- ALWAYS ensure the workplace is well lit. Ensure that lighting is placed so that you will not be working in your own shadow.
- Do not use tools in the presence of flammable liquids or gasses.
- Stay alert, watch what you are doing, use common sense and do not operate the tool when you are tired.
- ALWAYS keep guards in place and in working order. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center, unless otherwise indicated in this instruction manual.

- Remove any adjusting keys or wrenches before starting. Form the habit of checking to ensure that keys, wrenches and tools are removed from the machine
- Don't force the machine and use the correct tool. It will do the job better and safer, at the rate for which it was intended.
- ALWAYS disconnect the machine from the power supply before carrying out any servicing or changing of accessories.
- Before further use of the tool, it 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 or other condition that may affect its operation.
- Have defective switches repaired by an authorized service center. Do not use a tool if the switch does not turn it on and off.
- ALWAYS check for any damage or any condition that could affect the operation of the machine. Damaged parts should be properly repaired.
- NEVER remove the cover panel unless the machine is disconnected from the power supply, and never use the machine with cover panels removed.
- Have your tool repaired by a qualified person. This tool complies with the relevant safety rules. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.
- NEVER use this product for any other purpose than that described in this booklet.
- NEVER abuse the power cable by yanking the cable to disconnect it from the socket. Keep the cable away from heat, oil or sharp edges.
- Guard against electric shock. Avoid body contact with earthed or grounded surfaces.
- If the tool should be used outdoors, use only extension cables intended for outdoor use and marked accordingly.
- Avoid accidental starting by making sure the power switch is off before plugging in the power cable.

Grounding

⚠ WARNING

- This drill press must be grounded while in use to protect the operator from electrical shock. This unit is equipped with an electrical cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.
- **DO NOT MODIFY THE PROVIDED PLUG.** If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.
- **CHECK** with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

Grounded Tools: Tools with 3-Prong Plugs

Tools marked **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically live terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.

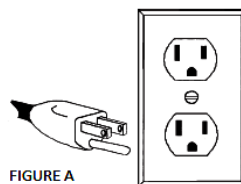


FIGURE A

Double Insulated Tools: Tools with Two-Prong Plugs

Tools marked **Double Insulated** do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. (See Figure B.)

Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration.

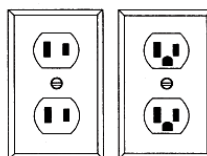


FIGURE B

Extension Cords

⚠WARNING

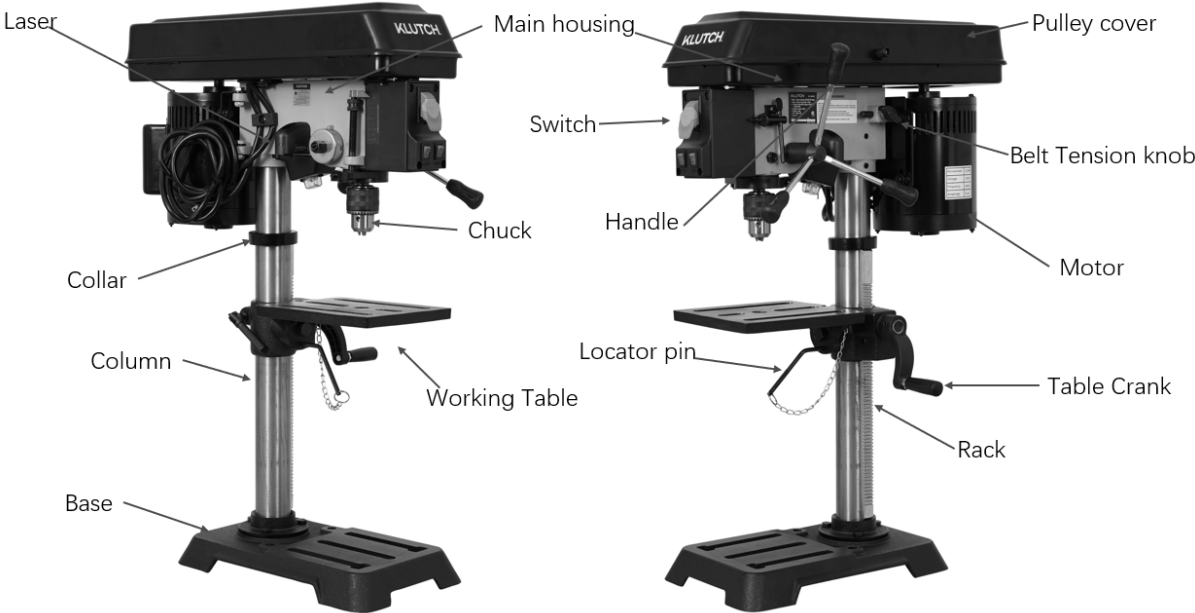
- **USE A PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and cause overheating.
- Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.
- Grounded tools require a 3-wire extension cord. Double Insulated tools can use either a 2- or 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the wire's gauge number, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Nameplate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	

- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

Main Parts of Drill Press

Subassembly	
Base	Motor
Belt Tension knob	Pulley Cover
Rack	Collar
Chuck	Switch
Main Housing	Working Table
Column	Table Crank
Laser	Locator pin
Feed Handle	



Assembly Instructions

⚠WARNING

- To protect the machine parts from moisture, a protective coating of light machine oil will have been applied to the outside surfaces. Remove any excess with a paper towel.
- Take care when lifting the head assembly, considering its weight.
- Before use, the machine must be mounted, and securely bolted, to a strong, heavy workbench, of sufficient height that you will be standing upright when working.
- Ensure the work place is adequately lit, and that you will not be working in your own shadow.
- During assembly ensure the drill press is disconnected from the power supply.
- Carefully remove contents from the packing box.
- Select a firm, level surface on which to assemble the drill press.

Column to Base

1. Loosen Set Screw (9) in Rack Collar (78) and remove Rack Collar and Gear Rack (92) from the Column (101). The Gear Rack is stowed in this position only for transit purposes.
2. Place Column Base (93) on the Base (94) and align the holes in the Column Base with holes in Base.
3. Attach using Bolt (102) in each hole through the Column and into the Base.

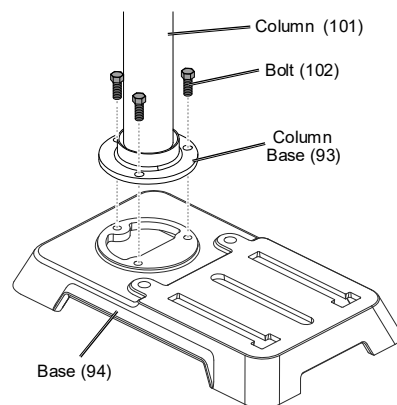
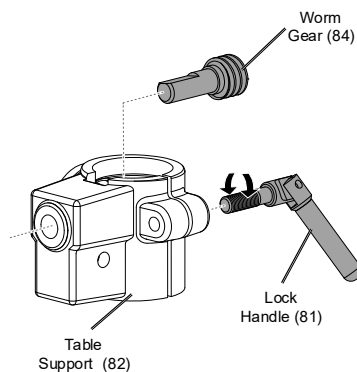
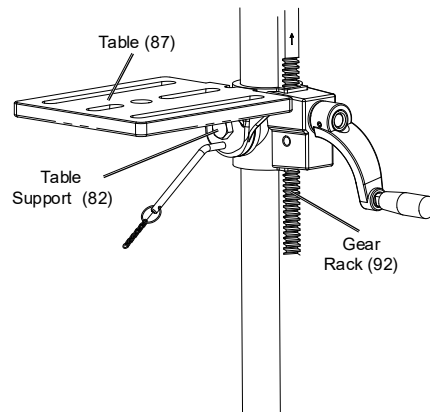


Table to Column

1. Assemble Worm Gear (84) and Lock Handle (81) to the Table Support (82). Do not tighten down the Lock Handle at this time.

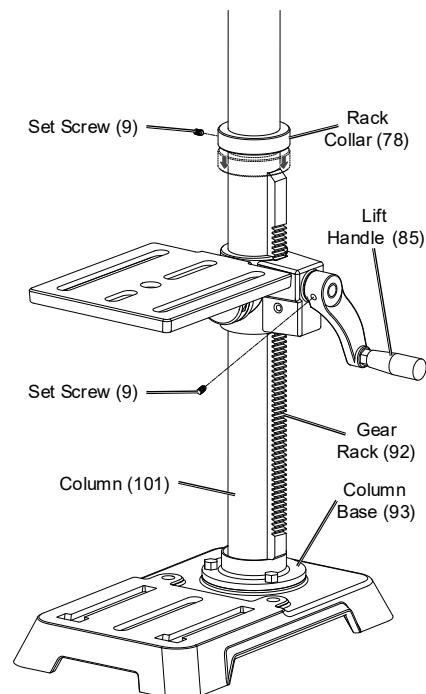


2. With the longer smooth end of Gear Rack (92) uppermost, place Gear Rack into notch of Table Support opening, making sure Gear Rack meshes with teeth of Inner Gear (83).



3. While holding Gear Rack and Table Support as assembled, slide both down onto the Column until Gear Rack bottom is positioned against Column Base.
 4. Replace Rack Collar, beveled side down, onto Column and top of Gear Rack. Tighten Set Screw.
- Note:** Ensure that Gear Rack is not pinched. Gear Rack should move freely when Table is rotated around Column.
5. Assemble the Lift Handle (85) to the end of the Worm Gear shaft and secure it in place with the Set Screw.

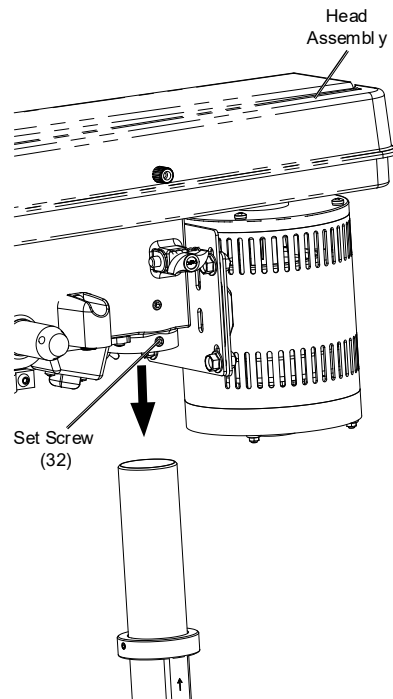
Note: Confirm the Set Screw engages the flat surface of the Worm Gear shaft.



Head Assembly to Column

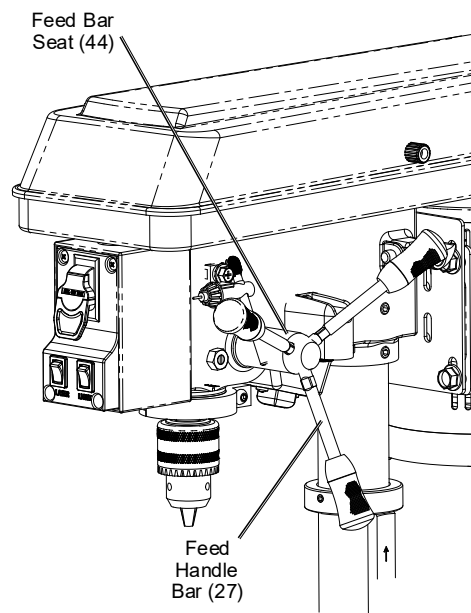
1. Loosen the Set Screw (32) on each side of the Head Assembly so they will stay clear while installing it.
2. With assistance, lift the Head Assembly above the Column, and gently slide it down the Column as far as it will go. Make sure the Head Assembly slides completely onto the Column.

3. Align the Head Assembly with the Base and tighten the two Set Screws to secure the Head Assembly in place.



Feed Handles/Bars

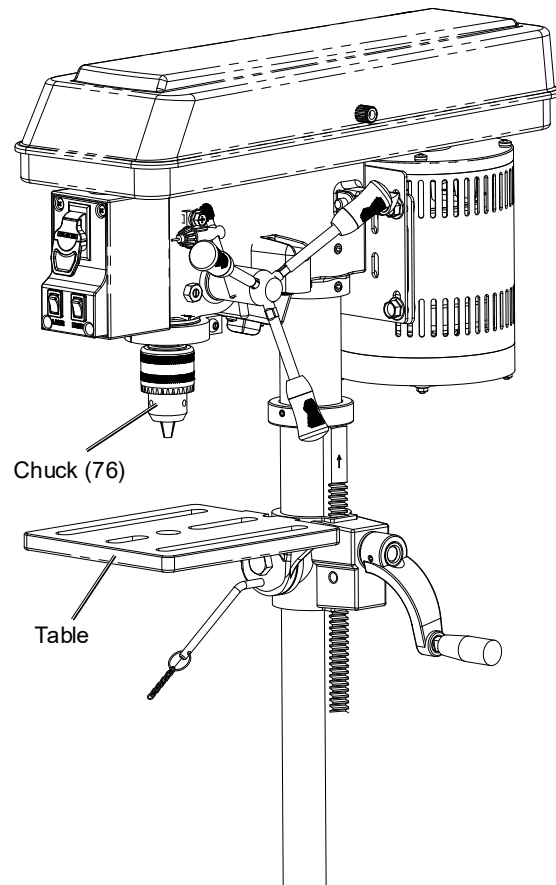
1. Thread the Feed Handle Bars (27) into the Feed Bar Seat (44) and tighten them.



Installing/Removing the Chuck

1. Loosen the Lock Handle and slide the Table up the Column to within 6" of the Spindle (71). Tighten the Lock Handle.
2. Open the jaws of the Chuck (76) to their maximum, using the supplied Chuck Key.
3. Put a piece of scrap wood on the table to protect the Chuck nose.

4. Ensuring all parts are thoroughly clean, dry and burr free, place the Chuck with its open jaws on the scrap wood, directly under the Spindle.
5. Use the Feed Handle to gently lower the Spindle so it is just entering the opening in the top of the Chuck.
6. Examine the Chuck from all sides to be sure that it is properly aligned with the Spindle.
7. Using the Feed Handles, insert the Spindle all the way into the Chuck, pressing the Chuck nose hard against the piece of scrap wood on the Table to secure the Chuck into place.



Before Each Use

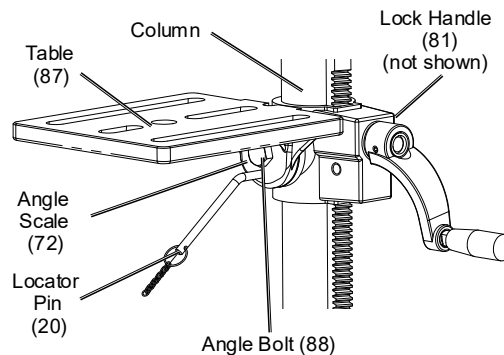
⚠WARNING

- When the table is angled/tilted, ensure the workpiece is clamped to the table.
- Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

Table Adjustment

1. Adjust the Table (87) by loosening the Lock Handle (81), moving the Table, and tightening the Lock Handle.
2. Tilt the Table by removing the Locator Pin (20), loosen the Angle Bolt (88) and tilting to the required angle. The angle can be read using the Angle Scale (72). When returning Table to zero degrees (horizontal), re-insert Locator Pin and tighten Angle Bolt.
3. TO ENSURE THAT THE DRILL IS ENTIRELY PERPENDICULAR TO THE TABLE, insert a straight round bar (not included) in the Chuck (76), place a square on the Table and bring it up to the round bar. Adjust the angle as needed.

CAUTION! To prevent injury from unexpected Table movement, tighten Angle Bolt and Lock Handle after adjustment.



Drill Bit Installation

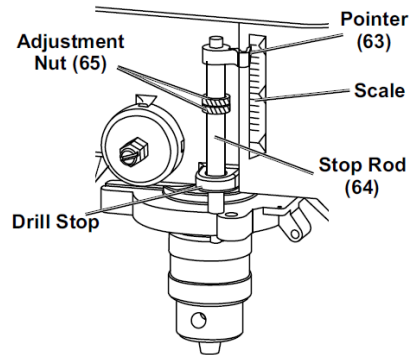
1. Using the chuck key, loosen the jaws of the chuck by rotating in an anticlockwise direction (Fig. 1).
2. Insert the drill bit into the chuck (Fig.2).
3. Whilst holding the drill bit in one hand rotate the top collar of the chuck in a clockwise direction. Insert the chuck key into 1 of the 3 rotating holes and tighten until drill bit is secure. (Fig. 3).



Setting a Drilling Depth

Located on the left side of the Headstock is the depth feed adjustment assembly, which allows drilling a series of holes to the same depth using one setting.

1. Lower the drill (with the power OFF) so that it contacts the material and hold in that position.
2. Screw down the lower Adjustment Nut (65) on the Stop Rod (64) until the gap between the underside of the Nut and the Drill Stop face equals the depth of the hole required.
3. Screw down the upper Adjustment Nut against the lower Adjustment Nut to lock setting.

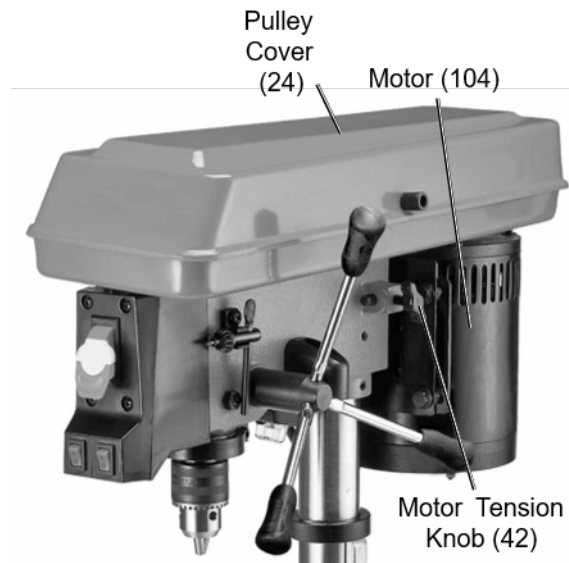


Note: Alternatively, drilling depth for a one-time procedure can be determined by lowering the drill (with the power OFF) until it contacts the work, noting the position of the Pointer (63) on the Scale, turning the drill ON, and drilling to the required depth using the Scale as a guide.

Changing Drill Speed

Before changing drill speeds, make sure the machine is switched OFF and UNPLUGGED.

1. Open the Pulley Cover.
2. Loosen the Motor Tension Knob (42) on the Headstock and move the Motor (104) towards the Headstock to relieve tension on the V-Belt (45).



3. Consult the chart below and position the V-Belt on the Pulleys (2, 17) according to the desired drill speed.
4. When the Belt has been correctly positioned, tighten it by pushing the Motor away from the Headstock until the Belt deflects by approximately 1/2" at its center when using reasonable thumb pressure. Lock this position in with the Motor Tension Knob.

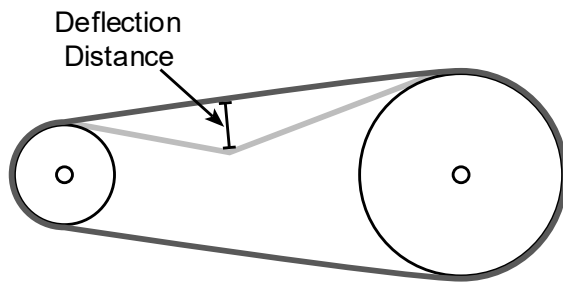
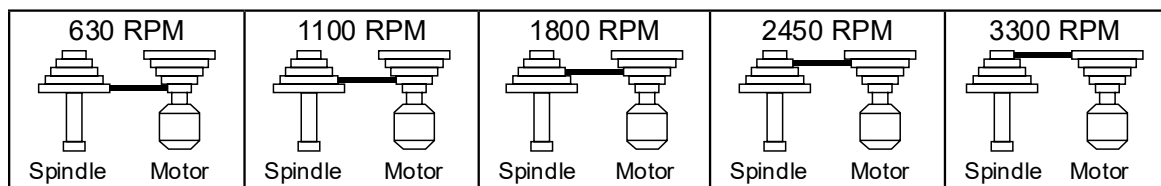


Figure A: Belt Deflection

Note: If the belt is too long to be properly tensioned, it must be replaced.

Speed Range (RPM)	WOOD		ALUMINUM / ZINC / BRASS		IRON / STEEL	
	inch	mm	inch	mm	inch	mm
2000-3500	3/8	9.5	7/32	5.6	3/32	2.4
1400-2000	5/8	16.0	11/32	8.75	5/32	4.0
1000-1400	7/8	22.0	15/32	12.0	1/4	6.4
800-1000	1-1/4	31.75	11/16	17.5	3/8	9.5
200-800	1-5/8	41.4	3/4	19.0	1/2	12.5



The chart above shows the belt arrangements for given drill speeds. A full chart is also located on the inside of the pulley cover.

Operating Instructions

⚠WARNING

- DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Moving guards must move freely and close instantly.
- Turn off and unplug the Drill Press before changing drill speed.
- The pulley cover must be closed to operate the drill press.

TURNING ON AND OFF

1. Switch the drill press On by pull below the switch.
2. Switch the drill press Off by push back the switch.
3. Secure your workpiece to the table if possible, use a vice or clamps.



Laser Alignment

1. Insert a small drill bit into the Chuck.
2. Place a piece of scrap wood on the table and mark an "X" where the drill bit will contact.
3. Secure the workpiece to the table.
4. Turn on the Laser and verify the laser lines are aligned with the "X" on the workpiece.
5. If the Laser lines are not aligned to the "X", Loosen the Set Screws on each Laser Housing and rotate the Laser Adjustment Knobs until the Laser lines are aligned to the "X". Retighten the Set Screws.

Led Lamp

Flip the LED Lamp Power Switch to turn the LED Lamp on.

DRILLING

1. Plug the Power Cord into an electrical outlet.
2. Turn on the LED Lamp if extra light is needed.
3. Set workpiece on Table.
4. Turn on the Laser to mark where the hole is to be drilled. Make minor workpiece alignment adjustments.
5. Turn the Drill Press on.
6. Slowly rotate the feed wheel handles to bring the drill bit down towards the table and into your workpiece. After drilling a hole, release the feed wheel handles slowly to return the chuck to its original position.

7. Continue the operation until the task is completed. When completed, switch the drill press Off by pressing the red (O) button on the switch (or flipping the Power Switch to OFF).
8. To lock Drill Press in the OFF position, remove the safety key from Power Switch and store key in a safe place until next use.

WARNING! TO PREVENT SERIOUS INJURY: If the drill bit grabs and spins the workpiece, do not attempt to stop the spinning with your hands. Step back and turn the drill press off. Wait for the spindle to stop turning before dislodging the workpiece.

9. To prevent accidents, turn off the tool and disconnect its power supply after use. Clean, then store the tool indoors out of reach of children's.

After Each Use

⚠WARNING

- Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.
- Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

1. Wipe external surfaces of the tool with clean cloth.
2. Using compressed air, blow clean the Table, Base, and Motor cooling vents of dirt and materials.
3. Apply paste wax to the Table and Tube Column to enable movement and to help keep surfaces clean.
4. All bearings are factory lubricated and need no further attention.
5. Periodically, lubricate the Rack teeth, Table gears and Spindle upper teeth.

Maintenance

⚠WARNING

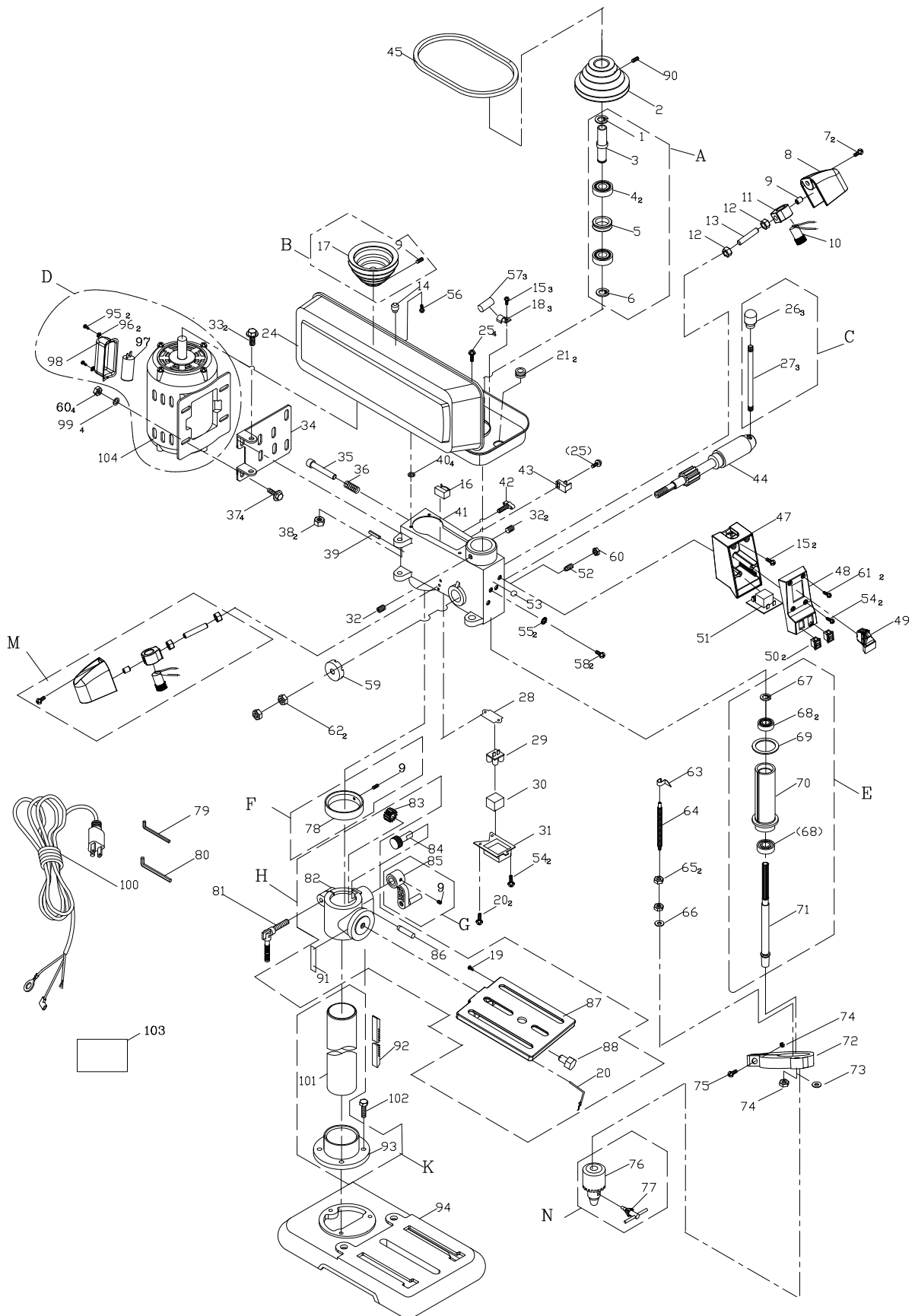
- Always remove the plug from the power supply before carrying out any adjustment, service or maintenance.
- If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

Maintenance Interval	Maintenance Point
MONTHLY	1. Check tightness of mounting bolts, and head and column securing set screws. 2. Check the drive belt for wear and replace if frayed or damaged. 3. Blow out with compressed air, or vacuum clean out, any dust that may have accumulated in the motor fan vents. 4. Apply a thin coat of wax paste or light oil to the table and column, for lubrication, and to help prevent corrosion. If the mains lead is damaged in any way, it should be replaced immediately
LUBRICATION	1. All bearings are packed with grease at the factory and require no further lubrication. 2. Occasionally, lubricate the quill shaft assembly and rack with light oil if required.

Troubleshooting

Failure	Possible Cause	Corrective Action
Noisy operation (under load).	1. Incorrect belt tension. 2. Dry spindle. 3. Loose pulley. 4. Loose belt. 5. Worn bearing.	1. Adjust tension. 2. Remove spindle and quill assembly and lubricate. 3. Tighten pulley. 4. Adjust belt tension. 5. Replace bearing.
Excessive drill wobble.	1. Loose chuck. 2. Worn spindle or bearing. 3. Worn chuck. 4. Bent drill bit.	1. Tighten by pressing chuck down on to a block of wood against the table. 2. Replace spindle shaft or bearing. 3. Replace chuck. 4. Renew drill bit.
Tool will not start.	1. Cord not connected / No power at outlet 2. Tool's thermal reset breaker tripped (if equipped) 3. Internal damage or wear (carbon brushes, switch, etc.)	1. Plug in cord; check outlet power. If outlet unpowered, check circuit breaker and ensure circuit capacity. 2. Turn off tool and allow to cool; press reset button. 3. Have technician service the tool.
Motor won't start.	1. Motor connection 2. Switch connection faulty 3. Faulty switch 4. Motor windings burned 5. Pulley cover not closed / Micro switch on cover not operating	1. Check motor connections. 2. Check switch connections. 3. Replace switch. 4. Replace motor. 5. Close pulley cover; check micro switch operation and adjust/replace as necessary.
Drill binds in workpiece.	1. Excessive feed pressure. 2. Loose belt. 3. Loose drill. 4. Incorrect bit speed. 5. Drill angles incorrect for type of material.	1. Apply less pressure. 2. Check belt tension. 3. Tighten drill with key. 4. Adjust the drill speed reasonably. 5. Consult a technical manual dealing with materials, drills and cutting angles, and sharpen drill accordingly.
Drill bit burns or smokes.	1. Incorrect speed. 2. Swarf is not discharging. 3. Dull drill or not proper. Clearance for material. 4. Needs coolant. 5. Excessive feed pressure 6. Motor being strained by long or small diameter extension cord.	1. Adjust drill speed accordingly. 2. Clean drill. 3. Check sharpness & taper. 4. Use coolant whilst drilling. 5. Apply less pressure. 6. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load.
Table difficult to raise.	1. Needs lubrication. 2. Table lock tightened.	1. Lubricate with light oil. 2. Loosen clamp.

Parts Diagram



Parts List

Reference	Part Number	Part Description	Quantity
1	1	Circlip	1
2	2	Spindle Pulley	1
3	3	Drive Sleeve	1
4	4	Ball Bearing	2
5	5	Retainer	1
6	6	Circlip	1
7	7	Screw	2
8	8	Laser Cover	2
9	9	Set Screw	5
10	10	Laser	2
11	11	Laser Base	2
12	12	Nut	4
13	13	Hex Screw	2
14	14	Pulley Cover Knob	1
15	15	Screw	6
16	16	Wire Clip	1
17	17	Motor Pulley	1
18	18	Wire Fix Plate	3
19	19	Screw	1
20	20	Locator Pin	1
21	21	Rubber Bushing	2
22	24	Pulley Cover	1
23	25	Screw	5
24	26	Feed Handle Knob	3
25	27	Feed Handle Bar	3
26	28	LED Pressure Plate	1
27	29	LED Lamp	1
28	30	LED Lamp Cover	1
29	31	LED Lamp Base	1
30	32	Hex Screw	4
31	33	Hex Screw	2
32	34	Motor Plate	1
33	35	Motor Rod	1
34	36	Compressor Spring	1
35	37	Hex Screw	4
36	38	Insert Nut	2
37	39	Spring Pin	1
38	40	Flat Washer	4
39	41	Headstock	1
40	42	Motor Tension Knob	1
41	43	Key Holder	1
42	44	Feed Bar Seat	1
43	45	V-Belt	1
44	46	Rivet	2
45	47	Switch Box	1
46	48	Switch Box Cover	1
47	49	On/Off Switch	1
48	50	Laser Switch	2
49	51	Circuit Board	1
50	52	Quill Set Screw	1
51	53	Earth Mark	1
52	54	Screw	4
53	55	Star Washer	2
54	56	Screw	1
55	57	Greece Pipe	3

Reference	Part Number	Part Description	Quantity
54	58	Screw	1
55	59	Spring Cover	1
56	60	nut	5
57	61	Screw	2
58	62	nut	2
59	63	Pointer	1
60	64	Stop Rod	1
61	65	Adjustment Nut	2
62	66	Flat Washer	1
63	67	Circlip	1
64	68	Ball Bearing	2
65	69	Rubber Pad	1
66	70	Quill	1
67	71	Spindle	1
68	72	Angle Scale	1
69	73	Flat Washer	1
70	74	nut	2
71	75	Hex Column Screw	1
72	76	Chuck	1
73	77	Chuck Key	1
74	78	Rack Collar	1
75	79	Wrench	1
76	80	Wrench	1
77	81	Lock Handle	1
78	82	Table Support	1
79	83	Inner Gear	1
80	84	Worm Gear	1
81	85	Lift Handle	1
82	86	Inner Gear Shaft	1
83	87	Table	1
84	88	Angle Bolt	1
85	90	Hex Socket Screw	2
86	91	Table Angle Scale	1
87	92	Gear Rack	1
88	93	Column Base	1
89	94	Base	1
90	95	Screw	2
91	96	Flat Washer	2
92	97	Capacitor	1
93	98	Capacitor Box	1
94	99	Flat Washer	4
95	100	Power Cord	1
96	101	Column	1
97	102	Bolt	3
98	103	Manual	1
99	104	Motor	1
	A	Drive Sleeve Assembly	1
	B	Motor Pulley Assembly	1
	C	Handle Assembly	3
	D	Motor Assembly	1
	E	Quill Assembly	1
	F	Rack Collar Assembly	1
	G	Lift Handle Assembly	1
	H	Worktable Assembly	1
	K	Column Assembly	1
	M	Laser Assembly	2
	N	Chuck & Key	1

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

KLUTCH™

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