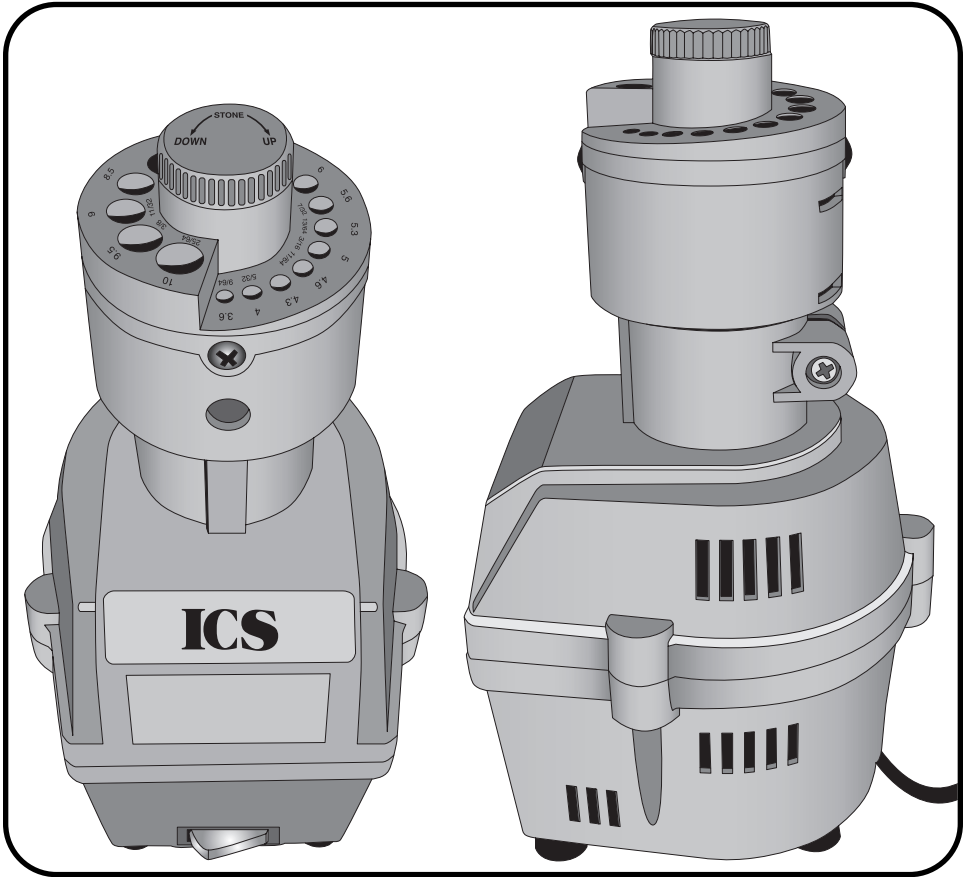


Electric Drill Bit Sharpener



INSTRUCTION MANUAL

SPECIFICATIONS

Power	0.58amps @ 120V, 60Hz; 1600RPM
Working Capacity	9/64" to 25/64" (3.6mm to 10mm)

SAVE THIS MANUAL.

You will need the manual for the safety warnings and cautions, assembly instructions, operating procedures, maintenance procedures, troubleshooting, parts list, and diagram.

SAFETY WARNING & CAUTIONS

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

READ ALL INSTRUCTIONS BEFORE USING THIS TOOL!

1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
2. **OBSERVE WORK AREA CONDITIONS.** Do not use machines or power tools in damp, wet, or poorly lit locations. Don't expose to rain. Keep work area well lit. Do not use electrically powered drills in the presence of flammable gases or liquids.
3. **KEEP CHILDREN AWAY.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cords.
4. **STORE IDLE EQUIPMENT.** When not in use, tools must be locked up in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **DO NOT FORCE THE TOOL.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool's capacities.
6. **USE THE RIGHT TOOL FOR THE JOB.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. Do not use a tool for a purpose for which it was not intended.
7. **DRESS PROPERLY.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear restrictive hair covering to contain long hair.
8. **USE EYE AND EAR PROTECTION.** Always wear ANSI approved chemical splash goggles when working with chemicals. Always wear ANSI approved impact safety goggles at other times. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.
9. **DO NOT ABUSE THE POWER CORD.** Do not yank it to disconnect it from the receptacle. Do not carry tools by the cord.
10. **DO NOT OVERREACH.** Keep proper footing and balance at all times. Do not reach over or across running machines.
11. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.
12. **DISCONNECT POWER.** Unplug when not in use, before servicing, and when changing accessories.
13. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make it a habit to check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.
14. **AVOID UNINTENTIONAL STARTING.** Be sure the switch is in the OFF position when not in use and before plugging in. Do not carry any tool with your finger on the trigger, whether it is plugged in or not.
15. **OUTDOOR EXTENSIONS CORDS.** When the equipment is operated outdoors, use only extension cords intended for outside use. See chart under "Extension Cords: for the proper AWG rating depending on the length of the cord(s) being used.
16. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate any tool when you are tired.
17. **CHECK DAMAGED PARTS.** Before using any tool, any part that appears damaged should be

- carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician.
- Do not use the tool if any switch does not turn on and off properly.
18. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
19. **REPLACEMENT PARTS AND ACCESSORIES** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool.
20. **DO NOT OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.
21. **KEEP AWAY FROM LIQUIDS.** Tool is designed for dry sharpening operations only.
22. **BE CAREFUL OF BITS WHEN SHARPENING.** Bits will become hot. Be careful when handling; allow tips to cool for some time before storing.
23. **SHARPENING HEAD MAY BECOME HOT WHILE USING.** This is a normal condition and no cause for alarm. Be careful when handling.

GROUNDING INSTRUCTIONS

This machine has a two-pronged plug. One prong is larger than the other prong. Do not attempt to modify the plug in any way. Modifying the plug will result in a safety hazard and void the warranty.

VOLTAGE WARNING

Common household current is 110-120 volts. As long as your tool is rated from 110V-120V, there will be no complications using this tool with household receptacles. If your tool is rated 220V-240V it has a completely different style of plug and must be used with a 220V-240V receptacle. Never try to plug a 110V-120V tool into a 220V-240V circuit (or vice-versa) or serious complications will arise, including possible injury to the operator. The plugs and receptacle have completely different shapes to prevent this from occurring accidentally. Do not modify your plug in any way. If you have any doubts, call a qualified electrician.

EXTENSION CORDS

Your tool has a two prong plug, therefore you may use either two-prong or three-prong extension cords. Only use rounded jacket extension cords listed by the Underwriters Laboratories (UL). If you are using the tool outdoors, you must use an extension cord rated for outdoor use. This is signified by the letters "WA" on the jacket.

The extension cord must have a minimum wire size depending on the amperage of the tool and the length of the extension cord. This size is signified by its AWG (American Wire Gauge) rating. The smaller the gauge, the greater the cable's capacity. It does not matter if you are using one cord, or two or more. The total length is what is used to determine the minimum AWG rating. Every cord used must meet the AWG rating. Use the chart below to determine what AWG rating is required for your situation. Cord length is rated in feet.

AMP RATING	TOTAL EXTENSION CORD(S) LENGTH FEET								A W G
	25	50	75	100	125	150	175	200	
0-10.0	18	18	16	16	14	14	12	12	
0-10.0	16	16	14	14	14	12	12	12	
0-10.0	14	14	12	12	12	12	12	-	
0-10.0	14	12	12	12	12	12	-	-	

Always inspect extension cords for any damage. If there are any loose, frayed, or exposed wires; damaged insulation; or defective connections, the cord must not be used.

OPERATIONS

Properly Sharpened Bits

Your bit is properly sharpened when it has the following characteristics. See Figure 1.

1. A sharp point in the center of the bit.
2. Two sharp and equal cutting edges.
3. Two trailing edges that are slightly lower than the cutting edges.

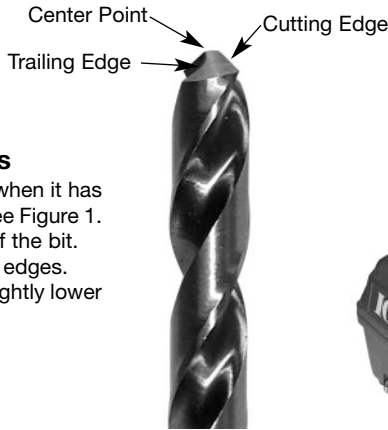


Figure 1 - Parts of the bit



Figure 2 - Putting Bits into Sharpener

Sharpening Procedures

- Step 1: Place sharpener on a flat, sturdy surface and plug in.
- Step 2: Select a clean bit to be sharpened and match its size with one of the holes in the head.
- Step 3: Put the bit into the appropriate hole and turn the unit on.
- Step 4: The bit must be kept in motion while in the machine. Exert a slight downward pressure onto the bit and rotate the bit back and forth about 20 degrees while sharpening. (see figure 2).
- Step 5: Turn unit off about 5-10 seconds.
- Step 6: Examine bit according to the "Sharpening Troubleshooting" section.
- Step 7: Repeat the above steps to the other side of the bit. Sharpen both sides the same amount of time, using the same amount of pressure.
- Step 8: Repeat the above steps as necessary to sharpen the bit.

Adjusting the Grinding Wheel

- Step 1: Turn the ADJUSTING KNOB (#4A) to the right to raise the wheel. This will give you an aggressive cutting action. This is also useful when you are working with short bits.
- Step 2: Lower the wheel by turning the KNOB to the left. This is desirable when you wish a finer ground edge, though it will take longer and require more repetitions.

MAINTENANCE

Changing the Wheel

- Step 1: Change the WHEEL (#7) if grooves or ridges mar the evenness of the grinding surface.
- Step 2: Remove the two SCREWS (#11). See Figure 4.
- Step 3: Remove the Index Head Assembly (#1, #2, & #4A)
- Step 4: Remove the Wheel Assembly (#5-8). Make sure the SPRING (#9) stays in place. Refer to the Parts Diagram if necessary.
- Step 5: Unscrew the ADJUSTMENT CYLINDER (#5) from the WHEEL BASE (#8) by turning clockwise.
- Step 6: Pry out the WASHER (#6).
- Step 7: Pop out the WHEEL BASE.
- Step 8: Press new WHEEL onto WHEEL BASE, replace WASHER, and screw CYLINDER back in.
- Step 9: Replace Wheel Assembly onto unit. Make sure that the inner flats of the ADJUSTMENT CYLINDER match the outer flats of the DRIVE SPINDLE (#13).
- Step 10: Replace the Index Head Assembly and SCREWS.

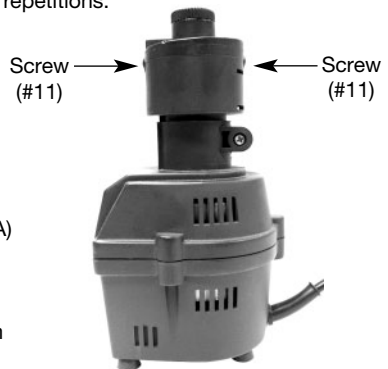


Figure 4 - Removing the Screws

CLEANING

1. Make sure to keep the surface of your unit free of grit, dirt and grease. Use soapy water or nontoxic solvents. Do not use petroleum-based solvents.
2. Keep the air vents free of foreign matter at all times.

TROUBLESHOOTING

Sharpening Troubleshooting

1. If the tip of the bit is turning blue, it is overheating. Reduce the amount of pressure and sharpening time. Cool bit in water between sharpening.
2. If one edge is longer than the other, and the point is not centered, sharpen the shorter side for a little more time. To prevent this from happening, sharpen both sides the same amount of time, using the same amount of pressure.
3. If you are sharpening a broken (rather than dull bit) and the time required to get a sufficient edge is too long, rough the bit into shape first using a bench grinder.

Operation Troubleshooting

1. If tile motor turns on, but the wheel does not spin, make sure the ADJUSTMENT CYLINDER'S (#5) inner flats are even with the outer flats of the SPINDLE (#13) as described in "Maintenance, Changing the Wheel".
2. If the motor does not turn on, it needs to be serviced or replaced by a qualified technician.

Parts List

Part. No.	Description	Quantity
4A	Adjustment Knob	1
1	Index	1
2	Cap Ring	1
5	Adjustment Cylinder	1
6	Washer	1
7	Grinding Wheel	1
8	Wheel Base	1
9	Spring	1
10	Screw	1
11	Cover	1
12	Housing	1
13	Ball Bearing	1
14	Drive Spindle	1
15	Nut	1

Part. No.	Description	Quantity
16	Connector-Male	1
17	Upper Motor Housing	1
18	Bolt	1
19	Motor	1
20	Cover	4
21	Terminal	4
22	Capacitor	1
23	Lower Motor Housing	1
24	Switch	1
25	Screw	2
26	Cable	1
27	Rubber Pad	3
28	Screw	3

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

Parts Diagram

