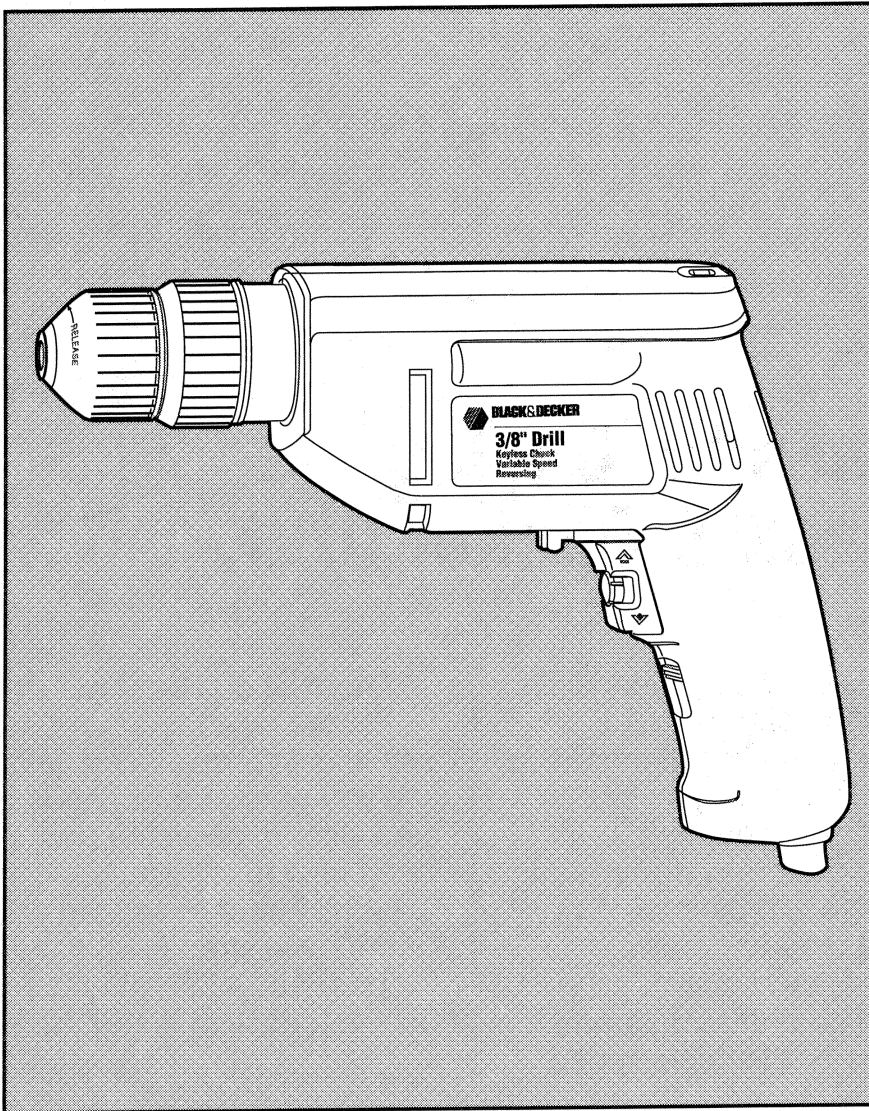




BLACK&DECKER®



Instruction Manual

3/8" Keyless Chuck

Variable Speed Reversing Drill



Thanks for Buying a Black & Decker Drill.

Your Black & Decker drill has been built to Black & Decker's exacting standards of quality to ensure years of superior performance.

With your new drill you can drill holes in practically any material you can name, you can buff, sand, polish, mix paint and drive screws with features like variable speed

and reversing capability.

Please take the time to read this informative manual and pay particular attention to the safety rules we've provided for your protection.

Don't forget to send in your owner's registration card.

**THANKS AGAIN FOR
BUYING BLACK & DECKER!**



BLACK & DECKER®

IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using Electric Tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place—out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended, for example, don't use circular saw for cutting tree limbs or logs.
8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **USE SAFETY GLASSES.** Also use face or dustmask if cutting operation is dusty.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
11. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
14. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked. More detailed extension cord information can be found on page 12.
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
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 by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
20. **DO NOT OPERATE** portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.

CAUTION: When drilling into walls, floors or wherever "live" electrical wires may be encountered. **DO NOT TOUCH THE CHUCK OR ANY FRONT METAL PARTS OF THE DRILL!** Hold the Drill only by the plastic handle to prevent shock if you drill into a "live" wire.

SAVE THESE INSTRUCTIONS

Double Insulation

DOUBLE INSULATED tools are constructed throughout with TWO separate "layers" of electrical insulation or one DOUBLE thickness of insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two-prong plug which permits you to use extension cords without concern for maintaining a ground connection. See page 12 for more extension cord information.

NOTE: DOUBLE-INSULATION does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical failure within the tool.

CAUTION: When servicing all tools, **USE IDENTICAL REPLACEMENT PARTS.** Repair or replace damaged cords.

Lubrication

Your new drill uses self lubricating bearings and gears. As a result, the gear case contains no grease. **DO NOT ADD GREASE TO THIS TOOL!** To do so may cause grease leakage and shorten gear life.

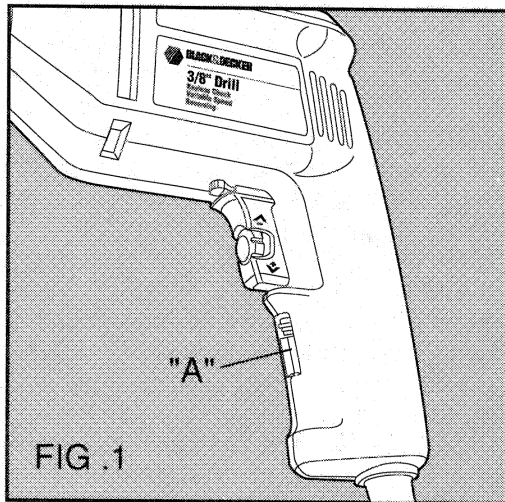
Motor

Your Black & Decker tool is powered by a B&D built motor. Be sure your power supply agrees with the nameplate marking. A marking of 120 volts, 50/60 Hz or 120 volts, AC Only means that the tool is designed to operate on normal 120 volt house current. Voltage decrease of more than 10% will cause loss of power and overheating.

All Black & Decker tools are factory tested. If this tool does not run, check the power supply.

Switches

To start Drill, depress trigger switch; to stop Drill, release trigger. To lock trigger in "ON" position for continuous operation, depress trigger and push up locking button "A" Figure 1, then gently release trigger. To release locking mechanism, depress trigger fully, then release it. Before using the tool (each time) be sure that the locking button release mechanism is working freely.



Do not lock the switch "ON" when drilling by hand so that you can instantly release the trigger switch if the bit binds in the hole.

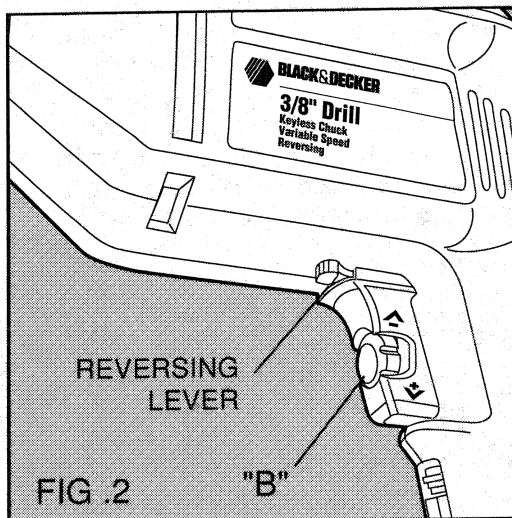
The locking button is for use only when the drill is mounted in a drill press stand or otherwise held stationary.

Be sure to release the locking button before disconnecting the plug from the power supply. Failure to do so will cause the tool to start immediately the next time it is plugged in. Damage or injury could result.

VARIABLE SPEED SWITCH (a) For normal operation, rotate the Infinite Speed Lock Dial "B", Figure 2 clockwise until it stops. This permits "FREE HAND" speed control — the farther the trigger is depressed, the higher the R.P.M. (b) To set the trigger switch to produce a selected speed each time it is squeezed, first rotate the dial clockwise until it stops. Fully depress trigger, and with the Drill running at highest R.P.M. push up switch

locking button "A" (Figure 1). Release trigger and the tool will stay "ON". Now, rotate the dial counterclockwise and you will notice a decrease in R.P.M. Continue rotating dial until desired speed is obtained. To turn Drill "OFF", squeeze trigger and release. (c) Use lower speeds for **STARTING HOLES WITHOUT A CENTER PUNCH, DRILLING IN METAL OR PLASTICS, DRIVING SCREWS, DRILLING CERAMICS.** Higher speeds are better for **DRILLING WOOD AND COMPOSITION BOARDS, AND FOR USING ABRASIVE OR POLISHING ACCESSORIES.**

THE REVERSING LEVER is used for withdrawing bits from tight holes and removing screws. It is located above the trigger switch (Fig. 2). To reverse the motor, release the trigger **FIRST** and then push the lever to the right. After any reversing operations, return lever to forward position.



Operation

DRILLING

1. Always unplug the drill when attaching or changing bits or accessories.
2. Use sharp drill bits only. For **WOOD**, use twist drill bits, spade bits, power auger bits, or hole saws. For **METAL**, use high speed steel twist drill bits or hole saws. For **MA-SONRY**, such as brick, cement,

cinder block, etc., use carbide-tipped bits.

3. Be sure the material to be drilled is anchored or clamped firmly. If drilling thin material, use a wood "back-up" block to prevent damage to the material.
4. Always apply pressure in a straight line with the bit. Use enough pressure to keep drill biting, but do not push hard enough to stall the motor or deflect the bit.
5. Hold drill firmly to control the twisting action of the drill.
6. **IF DRILL STALLS**, it is usually because it is being overloaded or improperly used. **RELEASE TRIGGER IMMEDIATELY**, remove drill bit from work, and determine cause of stalling. **DO NOT CLICK TRIGGER OFF AND ON IN AN ATTEMPT TO START A STALLED DRILL — THIS CAN DAMAGE THE DRILL,**
7. To minimize stalling or breaking through the material, reduce pressure on drill and ease the bit through the last fractional part of the hole.
8. Keep the motor running when pulling the bit back out of a drilled hole. This will help prevent jamming.
9. With Variable Speed Drills there is no need to center punch the point to be drilled. Use a slow speed to start the hole and accelerate by squeezing the trigger harder when the hole is deep enough to drill without the bit skipping out.

Drilling In Metal

Use a cutting lubricant when drilling metals. The exceptions are cast iron and brass which should be drilled dry. The cutting lubricants that work best are sulphurized cutting oil or lard oil; bacon-grease will also serve the purpose.

NOTE: Large (5/16" to 3/8") holes in steel can be made easier if a pilot hole (5/32" to 3/16") is drilled first.

Drilling In Wood

Holes in wood can be made with the same twist drills used for metal. These bits may overheat unless pulled out frequently to clear chips from the flutes. For larger holes, use Power Drill Wood Bits. Work that is apt to splinter should be backed up with a block of wood.

Drilling In Masonry

Use carbide tipped masonry bits at low speeds. Keep even force on the drill but not so much that you crack the brittle materials. A smooth, even flow of dust indicates the proper drilling rate.

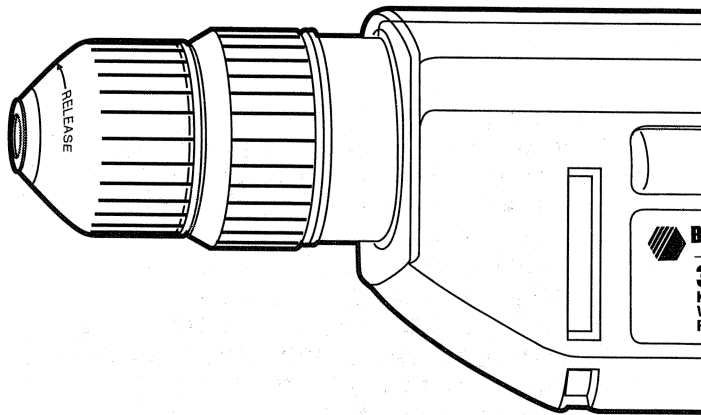
ACCU-BORE® Bubble Level

Your drill is equipped with ACCU-BORE® bubble level that assists you in drilling level holes.

For horizontal drilling, tilt the drill up or down as required so that the bubble floats in the center of the parallel lines drawn on the glass. When the bubble is centered between the lines, as shown in Figure 3A, the drill is level.

For vertical drilling, align the drill so that the bubble in the level floats in the center of the bull's-eye, as shown in Figure 3B.

To assure accuracy, first place a level on your workpiece and position it so that it is level. Then, when the drill reads level, the two will be aligned. (Any bubble level can only indicate level to the earth's gravitational field.)

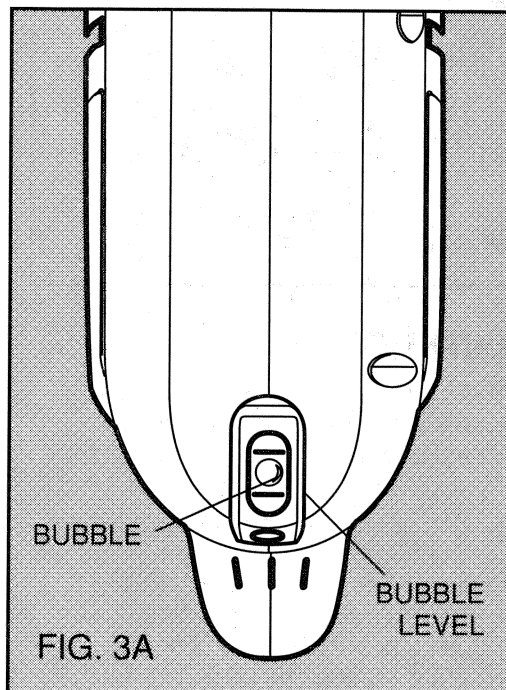


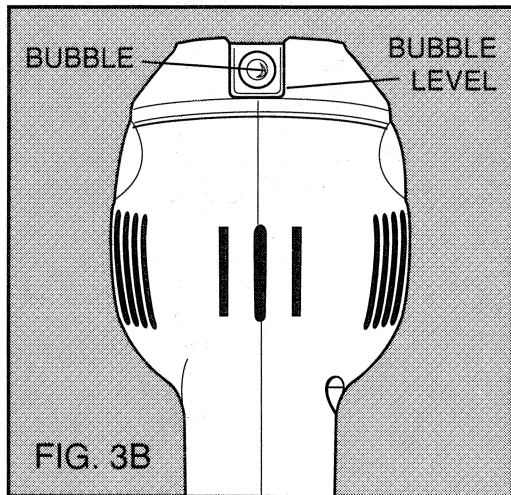
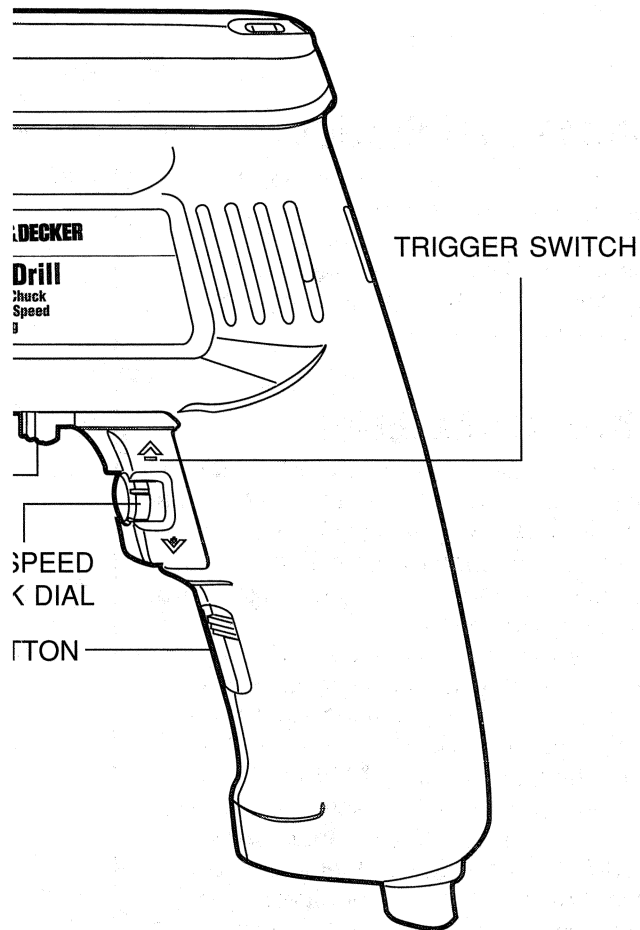
REVERSING LEVER ———

INFINIT
LK

LOCKING I

NOTE: The level is filled with mineral oil that may cause minor skin or eye irritation when contacted. If the level breaks and this fluid gets on your skin, rinse thoroughly with water. If any liquid gets in your eyes, rinse thoroughly with water and call a physician immediately.





Keyless Chuck

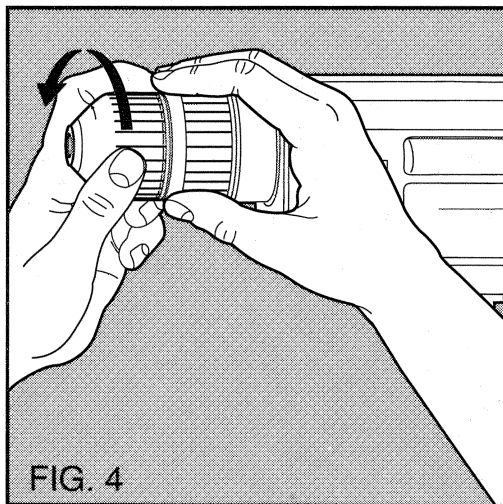
Your tool features a keyless Chuck for greater convenience. To insert a drill bit or other accessory, follow the steps listed below.

1. **TURN OFF AND UNPLUG.** Make sure that the switch Lock On button is released.

2. Grasp the rear half of the chuck with one hand and use your other hand to rotate the front half in the direction marked "RELEASE" on the nose of the chuck, as shown in Figure 4. Rotate far enough so that the chuck opens sufficiently to accept the desired accessory.
3. Insert the bit or other accessory about 3/4" into the chuck and tighten securely by holding the rear half of the chuck and rotating the front portion in the "GRIP" direction.

To release the accessory, repeat step 2 listed above.

WARNING Do not attempt to tighten drill bits (or any other accessory) by gripping the front part of the chuck and turning the tool on. Damage to the chuck and personal injury may result. Always unplug unit and turn off switch when changing accessories.



Chuck Removal

Tighten the chuck around the shorter end of a hex key (not supplied) of 1/4" or greater size.

Using a wooden mallet or similar object, strike key sharply in the "RELEASE" direction. This will loosen the chuck so that it can be unscrewed by hand.

Chuck Installation

Screw the chuck on by hand as far as it will go. Tighten the chuck around the shorter end of a 1/4" or larger hex key (not supplied) strike the longer end in the "GRIP" direction with a soft hammer.

Drill Accessories

The accessories listed in this manual are available at extra cost from your local dealer or Black & Decker Service Center. A complete listing of service centers is included on the owner's registration card packed with your tool.

If you need assistance in locating any accessory, please contact: Black & Decker (U.S.) Inc., Consumer Service Department 626 Hanover Pike P.O. Box 618 Hampstead, MD 21074-0618.

Recommended accessories for your Drill are shown in this manual (**CAUTION**: The use of any other accessory might be hazardous.) For safety in use, the following accessories should be used only in sizes up to the maximums shown in the table below.

Maximum Recommended Capacities

DRILL CAPACITY	3/8"
R.P.M.	0-2500
BITS, METAL DRILLING	3/8"
WOOD, FLAT BORING	1"
BITS, MASONRY DRILLING	1/2"
HOLE SAWS	1-1/8"

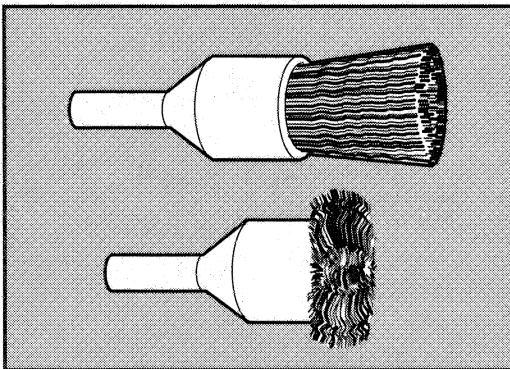
ACCESSORY MUST BE RATED FOR USE AT SPEED EQUAL TO OR HIGHER THAN NAMEPLATE R.P.M. OF TOOL WITH WHICH IT IS BEING USED.

WIRE WHEEL BRUSHES 4" Diameter Maximum
WIRE CUP BRUSHES 3" Diameter Maximum
BUFFING WHEELS 3" Diameter Maximum
RUBBER BACKING PADS 4-5/8" Diameter Max.

Carbon Removing Brushes

Made of tempered-steel wire; used with drills to remove rust and scale from metals. Leaves a burnished surface.

- A. Heavy-duty solid wire-filled brush.
- B. Side-flare brush for close corner work.
- C. Hollow-core, flare-bottom brush.



Small cleaning brush. (Not shown.)

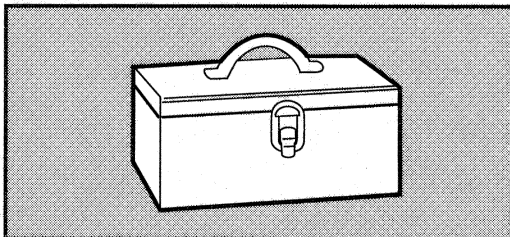
3" Wire Cup Brush

Use in cleaning and removing rust, scale, old paint. (Straight chuck shank). Maximum safe RPM—5,000.



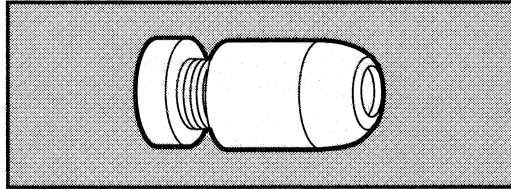
Heavy-Duty Tool Box

13" x 8-1/2" x 6-3/4"



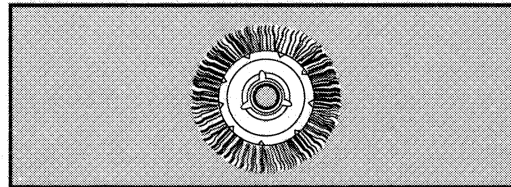
Drill Stop

Capacity 1/4" to 1/2" Governs drilling depth.



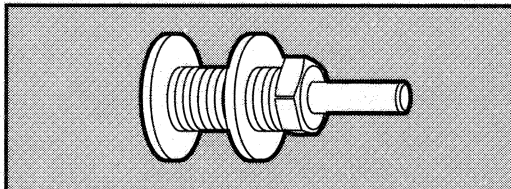
Wire Wheel Brushes

Use in cleaning and removing rust, scale, old paint. 4" Fine Brush, crimped; Maximum safe RPM—4,500 4" Coarse Brush, crimped; Maximum safe RPM—4,500.



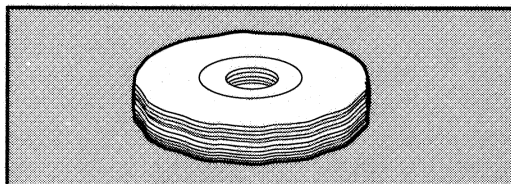
Wheel Arbors

Fit 1/4" to 1/2" Drills. Carry wire wheel brushes and buffing wheels.



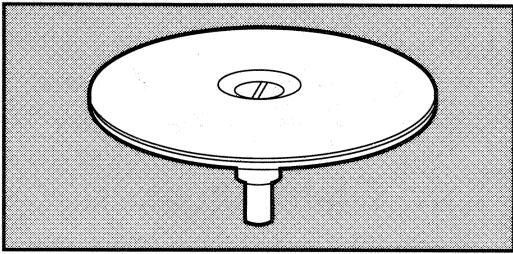
Buffing Wheels

Use with 1/4" to 1/2" Drills and Wheel Arbors. 3" x 3/8" x 1/2" Cotton Buff.



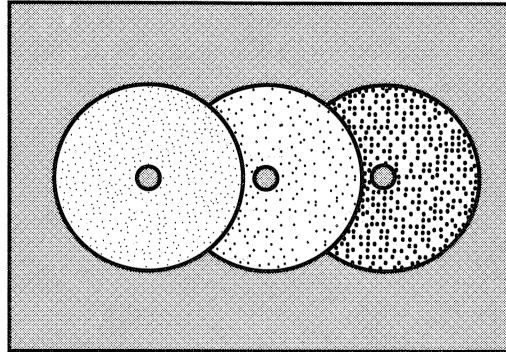
Rubber Backing Pad

Fit 1/4" to 1/2" Drills. 4-5/8" Rubber Backing Pad with plain shank. Used for sanding operations.



Sanding Discs

Use with Rubber Backing Pad.



High-Speed Hole Saws Use With Mandrels

SAW OUTSIDE DIAMETER	FOR CONDUIT SIZES	FOR PIPE TAP SIZES
5/8"		
3/4"	3/8"	
7/8"	1/2"	
1 5/16"		3/4"
1"		
1 1/16"		
1 1/8"	3/4"	

Round-Shank Masonry Bits

These bits are carbide-tipped for top performance and extra-long life in most masonry-drilling applications.

BIT DIAMETER (IN.)	USABLE DRILLING DEPTH (IN.)	SHANK DIAMETER (IN.)
3/16"	1 1/2"	3/16"
1/4"	2"	1/4"
5/16"	2 1/4"	1/4"
3/8"	2 1/2"	1/4"
1/2"	2 1/2"	1/4"

Notes

Extension Cords

Double insulated tools have 2-wire cords and can be used with 2-wire or 3-wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.) (C.S.A. in Canada). If the extension will be used outside, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work. The letters "WA" on the cord jacket indicate that the cord is suitable for outdoor use.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

To determine the minimum wire size required, refer to the chart below.

CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS

NAMEPLATE RATING-AMPS	TOTAL EXTENSION CORD LENGTH-FEET							
	25	50	75	100	125	150	175	200
0 - 10.0	18	18	16	16	14	14	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12
13.1 - 15.0	14	14	12	12	12	12	12	—

Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary. Black & Decker has extension cords available that are U.L. (C.S.A. in Canada) listed for outdoor use.

Home Use Warranty (A Full Two Year Warranty)

Black & Decker (U.S.) Inc. warrants this product for two years against any defects that are due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to the seller (if a participating retailer) for free replacement (proof of purchase may be required). This unit may also be returned to a Black & Decker Service Center or Authorized Service Station, listed under "Tools Electric" in the yellow pages for free replacement or repair at our option. This warranty does not apply to accessories. This warranty gives you specific legal rights and you may have other rights which vary from state to state. Should you have any questions, contact your nearest Black & Decker Service Center Manager.

Every Black & Decker tool is of the highest quality. If you wish to contact us regarding this product, please call toll free between 8:00 a.m. and 5:00 p.m. EST, Monday through Friday. 1-800-762-6672

Like most Black & Decker products your tool is listed by Underwriters Laboratories to ensure that it meets stringent safety requirements.

Form No.
159008



This symbol on the nameplate means the product is listed by Underwriters Laboratories, Inc.

(JAN93-CD-1)



See 'Tools-Electric'
-Yellow Pages-
for Service & Sales



BLACK & DECKER

Form No. 159008

Copyright ©1993 Black & Decker Printed in U.S.A. (JAN93-CD-1)

Black & Decker (U.S.) Inc., U.S. Power Tools Group, 701 E. Joppa Road, Towson, MD 21286 U.S.A.