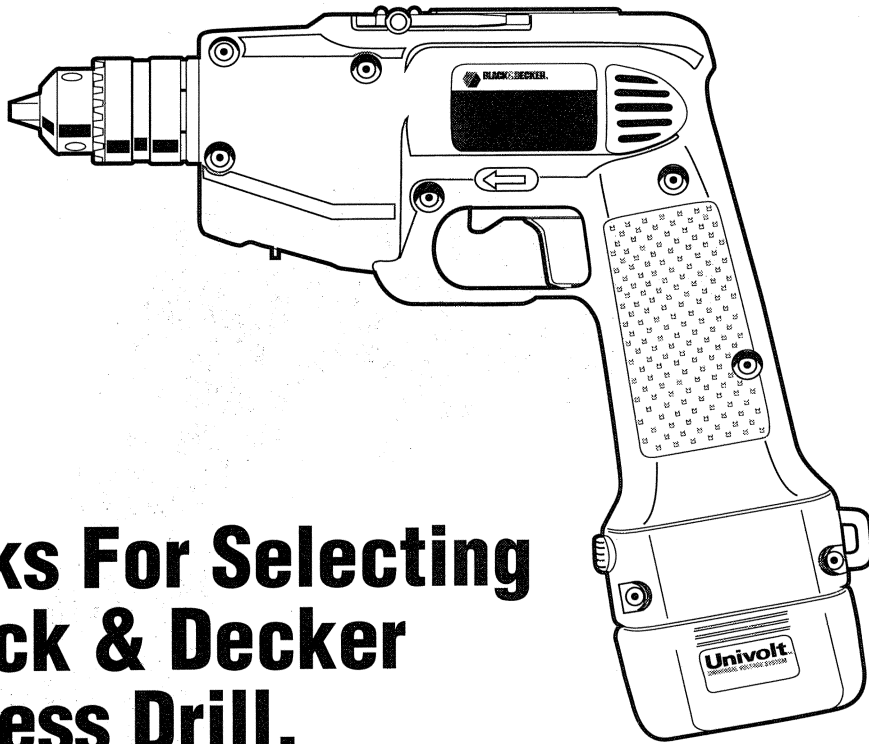




Instruction Manual

3/8" Cordless Dual Range Drills



Thanks For Selecting a Black & Decker Cordless Drill.

Your new cordless drill has been engineered to the same tough standards of quality that have made Black & Decker the world's leader in cordless technology. Made to be tough and reliable, your new drill packs plenty of power and long life for jobs far removed from any power source.

With it you can drill holes in practically any material you can name, you can buff, sand, polish and even drive and remove screws with features like variable speed* and reversing capability.

All of this versatility and Black & Decker's famous toughness make this drill every inch the professional that you are.

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

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

Thanks, again for buying Black & Decker!

*Variable speed is a feature on selected units.



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. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool.
4. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place—out of reach of children.
5. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
6. **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.
7. **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.
8. **USE SAFETY GLASSES.** Also use face or dustmask if operation is dusty.
9. **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.
10. **DON'T OVERREACH.** Keep proper footing and balance at all times.
11. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Keep handles dry, clean, and free from oil and grease.
12. **LOCK TOOL OFF** when not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
13. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
14. **AVOID UNINTENTIONAL STARTING.** Don't carry tool with finger on switch.
15. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
16. **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.
17. **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.

Be aware that this tool is always in an operating condition because it does not have to be plugged into an electrical outlet. Keep the switch control lever in the lock "OFF" position, as shown in Figure 5, when you are not using the tool.

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 FOR FUTURE USE.

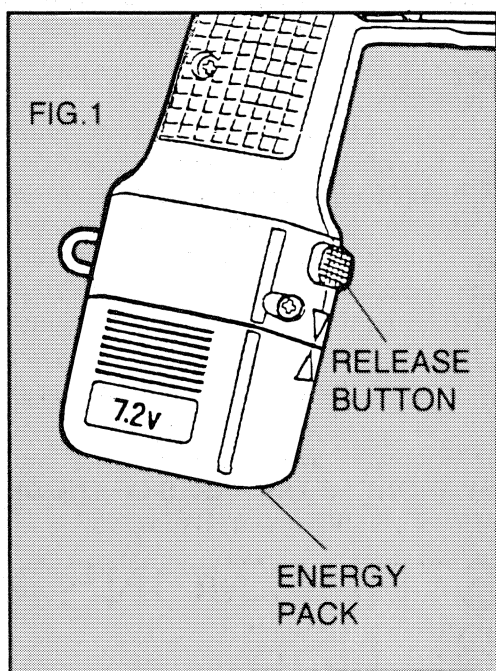
Your tool carton contains two separate instruction manuals; one for the cordless drills and one for the UNIVOLT one hour battery charger.

READ ALL OF THE INSTRUCTIONS IN THE UNIVOLT ONE HOUR BATTERY CHARGER INSTRUCTION MANUAL BEFORE ATTEMPTING TO CHARGE THE ENERGY PACK IN YOUR DRILL.

Removing and Installing the Energy Pack

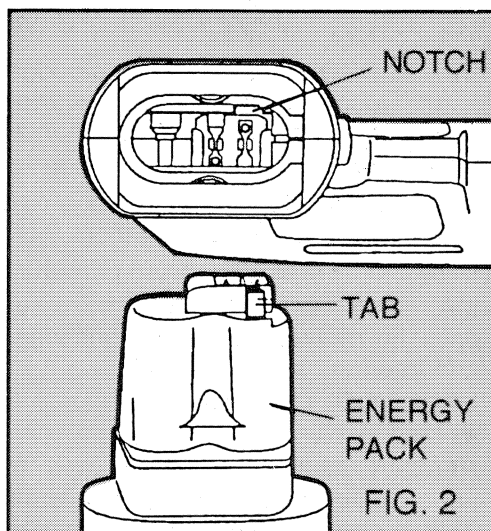
NOTE: THE BATTERIES IN YOUR ENERGY PACK ARE NOT FULLY CHARGED AT THE FACTORY.

To remove the energy pack from the tool, press the release button or buttons, as shown in Figure 1, and let the energy pack slide out of the tool handle. Insert it into the charger as described in the charger instruction manual.



To install the energy pack into the tool handle, align the tab, shown in Figure 2, with the notch inside the tool's handle and slide the energy pack firmly into the handle until you hear the lock snap into place.

An alternate means of alignment is to match the arrows on the front of the tool and the front of the energy pack. (Older packs do not have arrows on them.)



Energy Pack Important Charging Notes

1. Longest life and best performance can be obtained if the batteries are charged when the air temperature is about +75°F. **DO NOT** charge the batteries in an air temperature below +40°F or above +105°F. This is important and will prevent damage to the batteries and extend their life.
2. If the batteries do not charge properly—(1) Check current at receptacle by plugging in a lamp or other appliance, (2) Check to see if receptacle is connected to a light

switch which turns power off when you turn out the lights.

3. If the receptacle is o.k., and you do not get proper charging, take or send the tool and charger to your local Service Center. See "TOOLS, ELECTRIC" in yellow pages.
4. The energy pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. **DO NOT CONTINUE** to use the energy pack under these conditions. Repeat the charging procedure.
5. Under certain conditions, with the charger plugged into the power supply, the exposed charging contacts inside the charger can be shorted by foreign material and may cause a fire. Foreign materials of a conductive nature such as , but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no energy pack in the cavity. Unplug charger before attempting to clean.

Bubble Level*

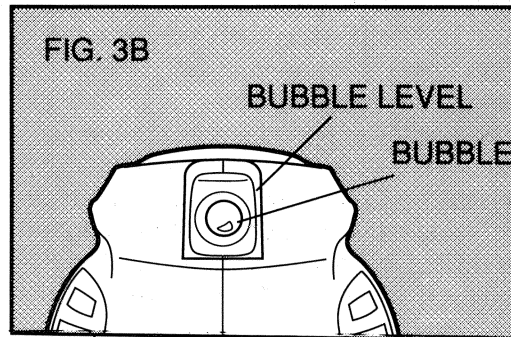
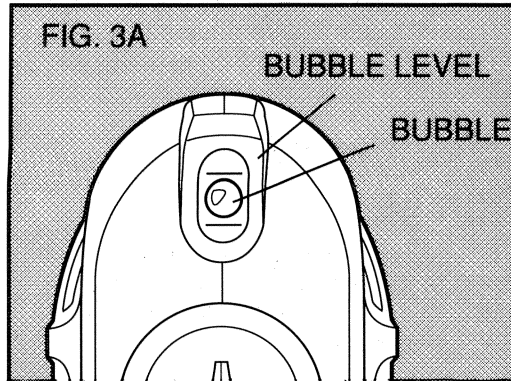
Your drill is equipped with a bubble level that assists you in drilling level holes. *A Bubble Level is a feature on selected units.

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.

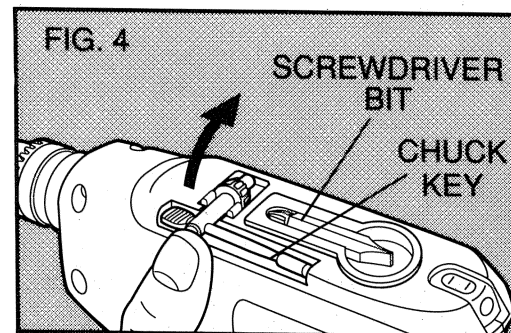
To assure accuracy, first place a level on your workpiece and position it so that it (the workpiece) is level. Then, when the drill reads level, the two will be aligned. (Any bubble level can only indicate level to the earth's surface.)

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.



Chuck Key Storage and Use

The chuck key for your drill is stored on the top of the housing, as shown in Figure 4. To remove the chuck key, grasp as shown in Figure 4 and pull the key up and out. To return the key to the holder, insert and push firmly until the clip snaps it to hold it in place.



To install a drill bit, place switch control lever (fig. 5) into center "OFF" position, loosen the chuck jaws and insert the bit all the way into the chuck. Pull the bit out about 1/8" and tighten the chuck with the key. Tighten in all three holes to prevent slippage.

To remove the bit, loosen the jaws in one hole only and remove bit. Always replace chuck key in the holder when finished.

Screwdriver Bit Storage

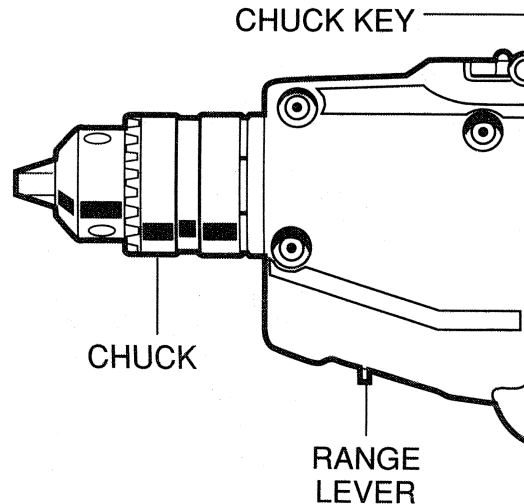
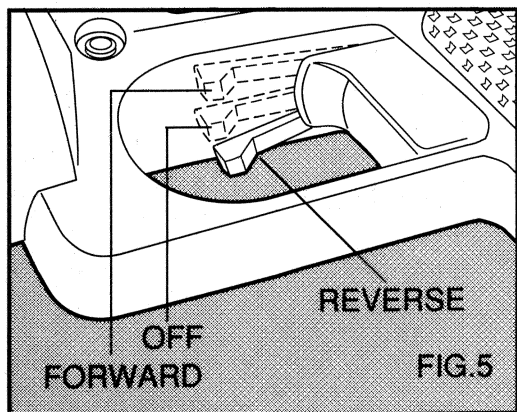
A double ended screwdriver bit is stored in the top of the housing with the chuck key. Place it in the chuck as you would any drill bit.

Switches

To turn the drill "ON", squeeze the trigger switch; to turn the drill "OFF", release the trigger switch.

Use lower speeds for starting holes without a center punch, in metals or plastics, driving screws, drilling ceramics or mixing paint. Higher speeds are better for drilling in wood, wood compositions and for using abrasive and polishing accessories.

A switch control lever determines the direction of rotation of the tool and also serves as a lock "OFF" lever. To select forward rotation (for drilling operations and driving screws) release the trigger switch and push the switch control lever to the right (when viewed from the chuck end) as shown in Figure 5.



To select reverse (for backing out screws or jammed drill bits) push the lever to the left (when viewed from the chuck end). The center position of the lever locks the tool in the "OFF" position.

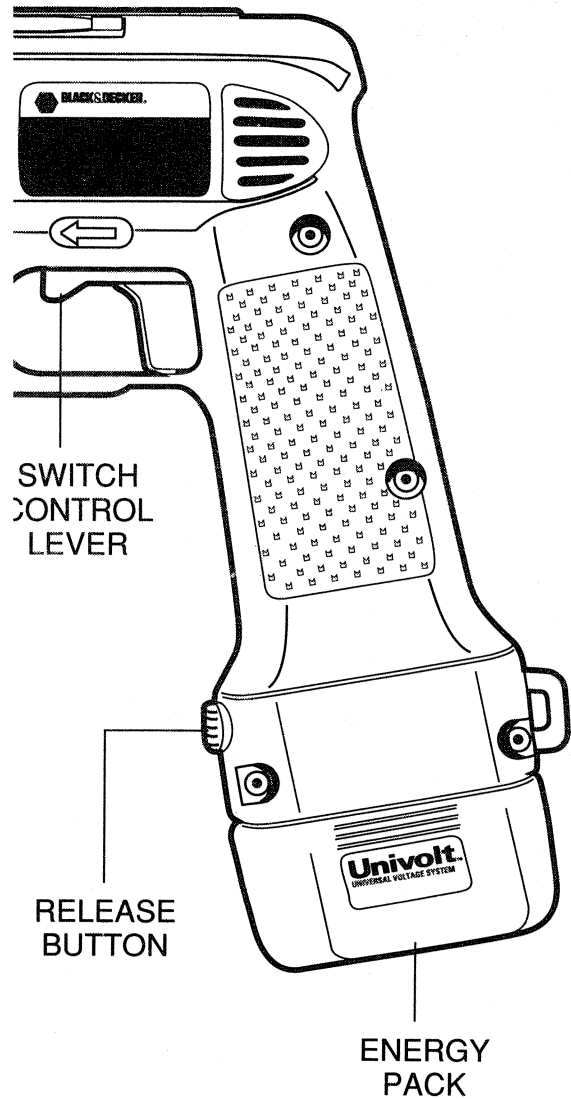
When changing the position of the switch control lever, be sure the tool is "OFF" and has stopped coasting.

1922, 1923, 2623, 6065 DRILLS:
ALWAYS USE CORRECT ENERGY PACK (7.2 VOLT PACK SUPPLIED WITH DRILL OR REPLACEMENT PACK EXACTLY LIKE IT). NEVER INSTALL ANY OTHER ENERGY PACK; IT WILL RUIN YOUR DRILL AND MAY CREATE A HAZARDOUS CONDITION.

1962, 1963, 2663, 6067 DRILLS:
ALWAYS USE CORRECT ENERGY PACK (9.6 VOLT PACK SUPPLIED WITH DRILL OR REPLACEMENT PACK EXACTLY LIKE IT). NEVER INSTALL ANY OTHER ENERGY PACK; IT WILL RUIN YOUR DRILL AND MAY CREATE A HAZARDOUS CONDITION.

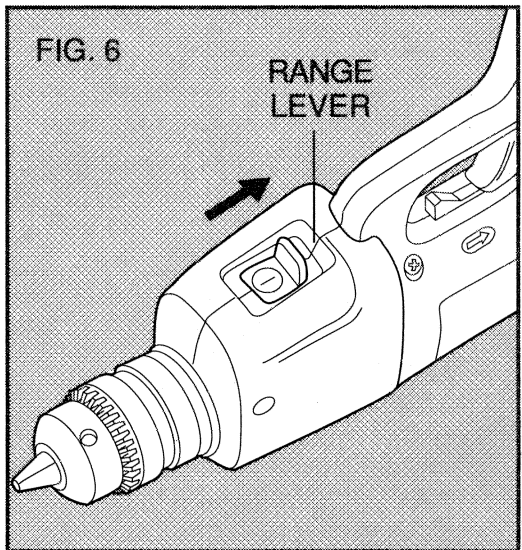
1923, 1963, 2623, 2663, 6065, & 6067 DRILLS ONLY:

This drill is equipped with a variable speed switch which enables you to select the best speed for a particular applica-



tool off and permit it to coast. Slide the range lever back toward the trigger guard (while coasting), as shown in Figure 6 (the symbol I will appear on the lever).

For standard duty drilling jobs, select the high speed, low torque setting. Turn off the drill and permit it to coast. Slide the range lever forward toward the chuck (while coasting), as shown in Figure 6 (the symbol II will appear on the lever).



tion. The farther you squeeze the trigger, the faster the drill will operate.

NOTE: Continuous operation at extremely low speeds may damage the drill and should be avoided.

Dual Range Operation

See Figure 6.

Your drill has a Dual Range feature that lets you select higher torque for heavier duty drilling jobs. To select the low speed, high torque setting, turn the

Catalog No.	(Symbol I) Low Range	(Symbol II) High Range
1922	300 RPM	600 RPM
1923		
2623	0-300 RPM	0-600 RPM
6065		
1962	350 RPM	1200 RPM
1963		
2663	0-350 RPM	0-1200 RPM
6067		

NOTE: It may sometimes be necessary to manually rotate the chuck slightly in order to shift from one range to the other. The lever must travel all the way to the opposite end of the slot in the housing. Operation at any other point will damage the drill.

Operation

DRILLING

1. Use sharp drill bits only. For WOOD, use twist drill bits, spade bits, power auger bits, or hole saws. For METAL, use highspeed steel twist drill bits or hole saws. For MASONRY, such as brick, cement, cinder block, etc., use carbide-tipped bits.
2. 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.
3. 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.
4. Hold drill firmly to control the twisting action of the drill.
5. **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.**
6. To minimize stalling or breaking through the material, reduce pressure on drill and ease the bit through the last fractional part of the hole.
7. Keep the motor running when pulling the bit back out of a drilled hole. This will help prevent jamming.
8. 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.

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.

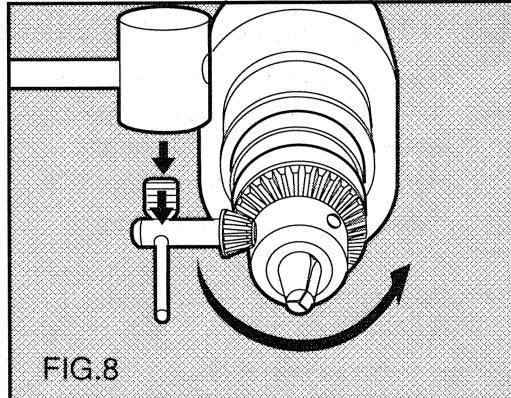
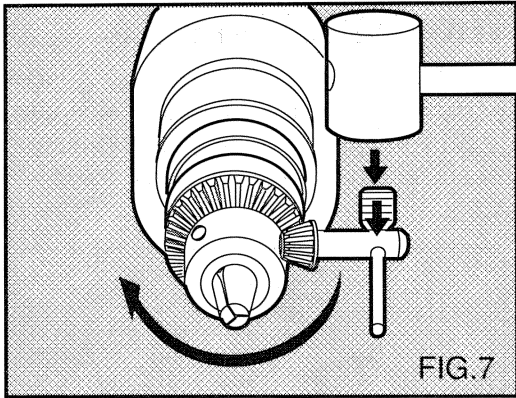
Drilling In Masonry

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.

Chuck Removal

(Figures 7 & 8)

1. Place chuck key in chuck as shown in Figure 7. Using a wooden mallet or similar object, strike key sharply in a **CLOCKWISE** direction. This will loosen screw inside chuck.
2. Open chuck jaws fully. Insert screwdriver into front of chuck between jaws to engage screw head. Remove screw by turning clockwise (left-hand-thread).
3. Place key in chuck as shown in Figure 8. Using a wooden mallet or similar object, strike key sharply in a **COUNTER-CLOCKWISE** direction. This will loosen chuck so that it can be unscrewed by hand.



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 Services Dept.** 626 Hanover Pike. P.O. Box 618, Hampstead, Maryland 21074-0618.

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

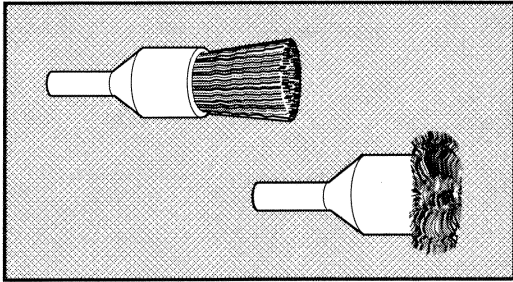
Maximum Recommended Capacities

DRILL CAPACITY	LOW RANGE (all drills)	HIGH RANGE (all drills)
R.P.M.	0-350	0-1200
BITS, METAL DRILLING	3/8"	1/4"
WOOD, FLAT BORING	1"	3/4"
BITS, MASONRY DRILLING	9/16"	1/2"

Carbon Removing Brushes

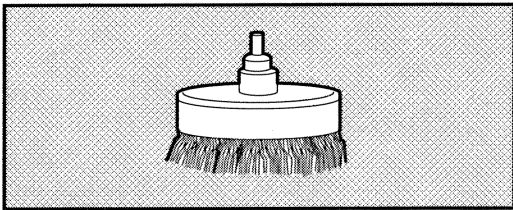
Made of tempered-steel wire; used with drills to remove rust and scale from metals. Leaves a burnished surface.

- 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.)



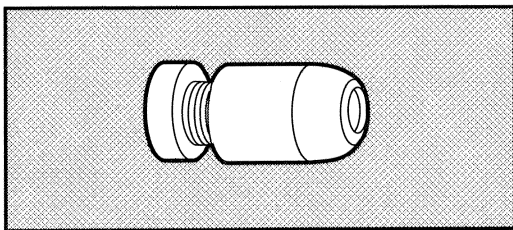
3" Wire Cup Brush

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



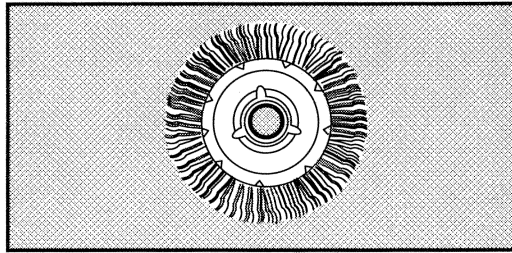
Drill Stop

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



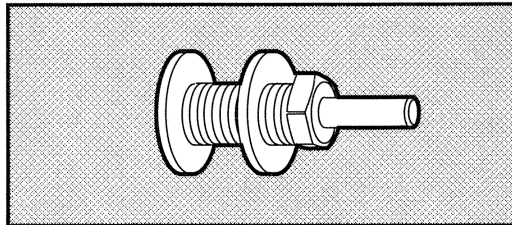
Wire Wheel Brushes

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



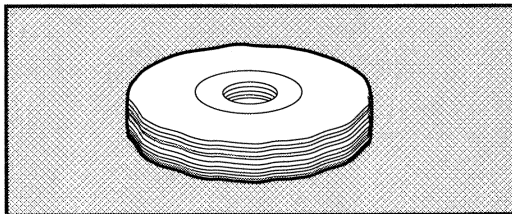
Wheel Arbors

Fit 1/4" to 1/2" Drills. Carry wire wheel brushes and buffing wheels. 1/4" Arbor (1/2" dia., 1/4" shank). 1/2" Arbor (1/2" dia., 1/2" shank).



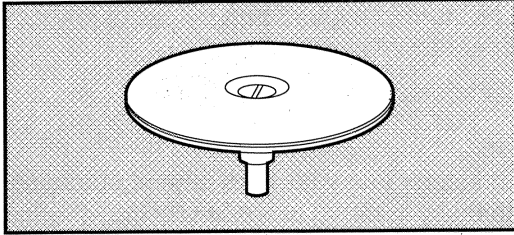
Buffing Wheels

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



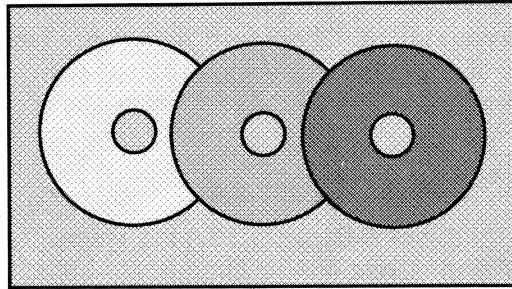
Rubber Backing Pad

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.



Pilot-Point™ Drill Bit

Available in three distinctive product lines.

High Speed Steel Bright Finish Bullet™ Bits

- Individual bits, available carded or bulk, in sizes from 1/16" to 1/2" in 1/64" increments*
- 8-, 11- and 14-piece sets packaged in convenient, reusable storage cases
- 21- and 29- piece sets packaged in rugged metal storage boxes that convert into self-standing drill bit holders

Black Oxide-Coated Bullet™ Bits

- 29 fractional jobber length sizes, available in bulk, from 1/16" to 1/2" in 1/64" increments*
- 13-, 21- and 29-piece sets packaged in durable metal index boxes

Titanium-Coated Bullet™ Bits

- 16 fractional sizes available carded*
 - 8-piece set packaged in pocket-sized storage case
- *Bullet™ Pilot Point™ Drill Bits can only be manufactured in 1/8" to 1/2" diameters. 1/16" to 7/64" sizes have 135-degree split point tips.

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"
9/16"	4 1/4"	1/4"

Batteries

After several years of normal use, the batteries in your battery pack will no longer accept a charge. This is a normal occurrence, and signifies that the batteries have reached the end of their useful life. Replacement battery packs are available at extra cost at your local BLACK & DECKER Service Center.

Your battery pack contains nickel cadmium batteries. The Environmental Protection Agency considers Cadmium to be a toxic material that can cause severe damage to the environment. Check with your state Environmental Protection Agency to find out how to properly recycle or dispose of cadmium, or you can turn in expired battery packs to your local BLACK & DECKER Service Center for proper recycling or disposal.

Warranty

Black & Decker (U.S.) Inc. warrants this product for one year from date of purchase. We will repair without charge, any defects due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to any Black & Decker Service Center or Authorized Service Station listed under "Tools Electric" in the yellow pages. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others.

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. ET, 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.



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

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



BLACK & DECKER.

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