

Operating Instructions

WARNING Disconnect the plug from the power source before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Variable Speed Controlled Trigger Switch

Your tool is equipped with a variable speed trigger switch. The tool can be turned "ON" or "OFF" by squeezing or releasing the trigger (Fig. 1). The speed can be adjusted from the minimum to maximum nameplate RPM by the pressure you apply to the trigger. Apply more pressure to increase the speed and release pressure to decrease speed.

Reversing Switch Button

The reversing switch button is located above the trigger switch and is used to reverse rotation of the bit. For forward rotation, (with the chuck pointed away from you) move button to the far left (Fig. 2). For reverse rotation move the button to the far right (Fig. 3).

CAUTION Do not change direction of rotation until the tool comes to a complete stop. Shifting during rotation of the chuck can cause damage to the tool.

Drill/Hammer Drill Selection Switch

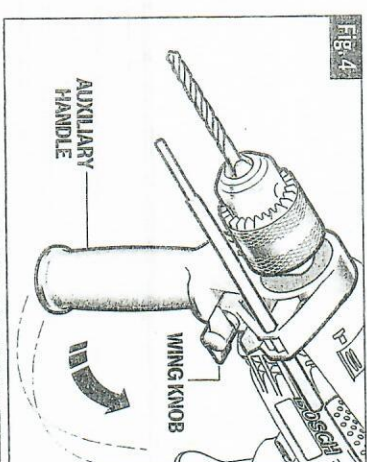
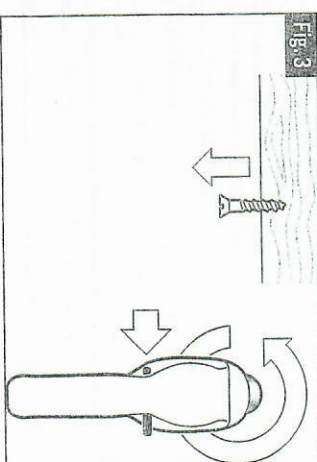
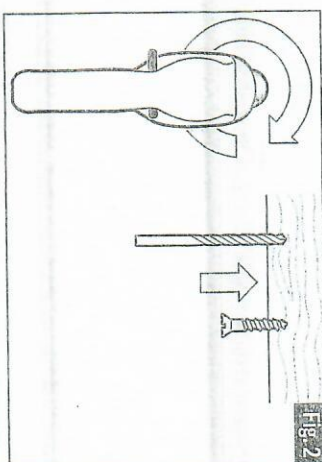
The selector switch allows the tool to be set for various drilling/hammer drilling applications. Rotate the selector dial right or left (Fig. 1) depending on the below applications.

CAUTION Do not operate the tool until the selection dial until the tool comes to a complete stop. Shifting during rotation of the chuck can cause damage to the tool.

Do not use demolition or chipping bits such as ball points, chisels, spades, gouges, etc.

Drill only action: For drilling in woods, metals, plastics or other non concrete materials.

Drill with hammer action: For drilling in concrete, asphalt, tile or other similar hard materials.



Auxiliary Handle

The auxiliary handle will provide additional control, support and guidance for the tool. The handle is adjustable around the 360° handle collar mount. To mount, loosen wing knob and slide handle completely over chuck onto the collar mount and tighten wing knob (Fig. 4).

Depth Gauge

Your drilling depth can be pre-set and/or repeated by using the depth gauge.

Setting depth: After the auxiliary handle is installed, make sure the accessory has been fully inserted into the tool holder before setting the depth gauge (Fig. 5). To adjust depth, push down on the depth gauge release lever, slide the depth gauge to desired depth and release pressure on lever to lock the depth gauge in place (Fig. 5).

Chuck Key and Storage Area

Your tool is equipped with a chuck key that is conveniently located on the cord protector where it is always handy and unlikely to get lost or misplaced (Fig. 1).

Inserting Bit

For small bits, open jaws enough to insert the bit up to the flutes. For large bits, insert the bit as far as it will go. Center the bit as you close the jaws by hand. This positions the bit properly, giving maximum contact between the chuck jaws and the bit shank.

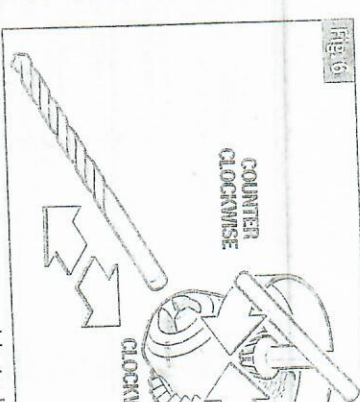
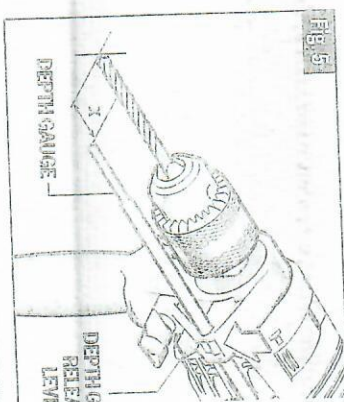
To tighten chuck, insert key into each of the three key holes in succession and tighten clockwise firmly. The chuck can be released by using one hole only (Fig. 6).

Tool Tips

You will extend the life of your bits and do heavier work if you always put the bit in contact with the work before pulling the trigger. During the operation, hold the tool firmly and exert light, steady pressure. Too much pressure at low speed will stall the tool. Too little pressure will keep the bit from cutting and cause excess friction by sliding over the surface. This can be damaging to both tool and bit.

DRILLING WITH VARIABLE SPEED

The trigger controlled variable speed feature will eliminate the need for center punches in hard materials. The variable speed trigger allows you to slowly increase RPM. By using a slow



starting speed, you are able to keep the bit from "wandering". You can increase the speed as the bit "bites" in work by squeezing the trigger.

DRILLING WITH VARIABLE SPEED

Variable speed drills will double the life of your bits by using power screwdriver bit in the drill mode. The technique is to start slowly, increase the speed as the screw runs down the screw snugly by slowing to a stop. Prior to driving screws, pilot clearance holes should be drilled.

FASTENING WITH SCREWS

The procedure shown in (Fig. 1) enable you to fasten materials together with your hammer drill in the drill mode without stripping, splitting or separating the material.

First, clamp the pieces together. Then, drill the first hole 2/3 the diameter of the screw. If the material is soft, drill only 2/3 the proper length. If it is hard, drill the entire length. Second, unclamp the pieces and drill the second hole the same diameter as the first.

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the screw shank in the first or top piece of wood.

Third, if flat head screw is used, countersink the hole to make the screw flush with the surface. Then, simply apply even pressure when driving the screw. The screw shank clearance hole in the first piece allows the screw head to pull the pieces tightly together.

The adjustable screw drill accessory will do all of these operations quickly and easily. Screw drills are available for screw sizes No. 6, 8, 10 and 12.

DRILL BITS

Always inspect drill bits for excessive wear. Use only bits that are sharp and in good condition.

TWIST BITS: Available with straight and reduced shanks for wood and light duty metal drilling. High speed bits cut faster and last longer on hard materials.

CARBIDE TIPPED BITS: Used for drilling stone, concrete, plaster, cement and other unusually hard nonmetals. Use continuous heavy feed pressure when employing carbide tip bits.

DRILLING WOOD

Be certain workpiece is clamped or anchored firmly. Always apply pressure in a straight line with the drill bit. Maintain enough pressure to keep the drill "biting".

When drilling holes in wood, twist bits can be used. Twist bits may overheat unless pulled out frequently to clear chips from flutes.

Use a "back-up" block of wood for work that is likely to splinter, such as thin materials.

You will drill a cleaner hole if you ease up on the pressure just before the bit breaks through the wood. Then complete the hole from the back side.

DRILLING METAL

There are two rules for drilling hard materials. First, the harder the material, the greater the pressure you need to apply to the tool. Second, the harder the material, the slower the speed. Here are a couple of tips for drilling in metal. Lubricate the tip of the bit occasionally with cutting oil except when drilling soft metals such as aluminum, copper or cast iron. If the hole to be drilled is fairly

FASTENING WITH SCREWS

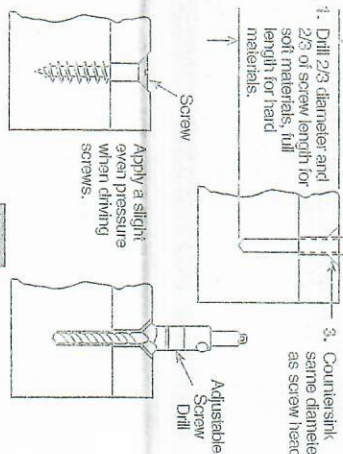


Fig. 7

large, drill a smaller hole first, then enlarge to the required size, it's often faster in the long run. Maintain enough pressure to assure that the bit does not just spin in the hole. This will dull the bit and greatly shorten its life.

DRILLING MASONRY

Soft materials such as brick are relatively easy to drill. Concrete however, will require much more pressure to keep the bit from spinning. Be sure to use carbide tip bits for all masonry work.

WARNING Before using an accessory, be certain that its maximum safe operating speed is not exceeded by the nameplate speed of the tool. Do not exceed the recommended wheel diameter.

SANDING AND POLISHING

Fine sanding and polishing require "touch". Select the most efficient speed.

When using polishing bonnets, always be sure the excess string that secures the bonnet is tucked well within the bonnet during operation.

RUNNING NUTS AND BOLTS

Variable speed control must be used with caution for driving nuts and bolts with socket set attachments. The technique is to start slowly, increasing speed as the nut or bolt runs down. Set the nut or bolt snugly by slowing the drill to a stop. If this procedure is not

followed, the tool will have a tendency to torque or twist in your hands when the nut or bolt seats.

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Wire Brushes

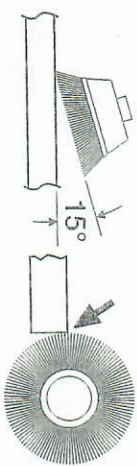
Work with brushes requires high speeds.

BRUSHING PRESSURE

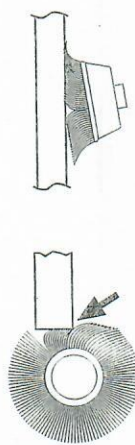
1. Remember, the tips of a wire brush do the work. Operate the brush with the lightest pressure so only the tips of the wire come in contact with the work.
2. If heavier pressures are used, the wires will be overstressed, resulting in a wiping action; and if this is continued, the life of the brush will be shortened due to wire fatigue.
3. Apply the brush to the work in such a way that as much of the brush face as

possible is in full contact with the work. Applying the side or edge of the brush to the work will result in wire breakage and shortened brush life.

CORRECT: Wire tips doing the work.



INCORRECT: Excessive pressure can cause wire breakage.



Dust Extraction

tool or with the dust extraction attachment.

For selection of dust collection systems and operating instructions, see the Operating / Safety Instructions for 'Dust Extraction Attachments for Hammers and Hammer Drills' included with your