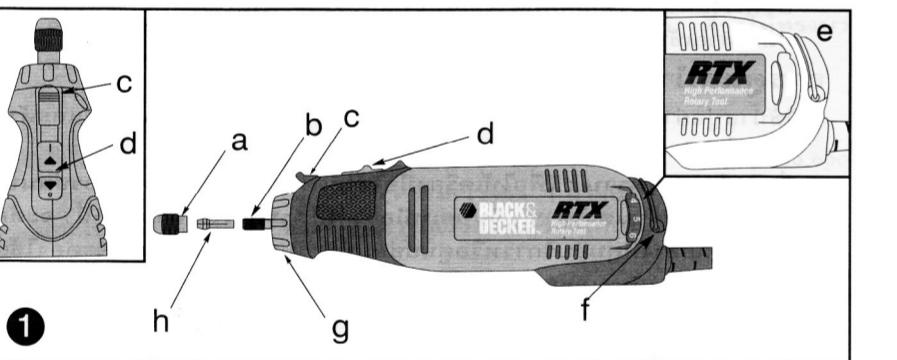


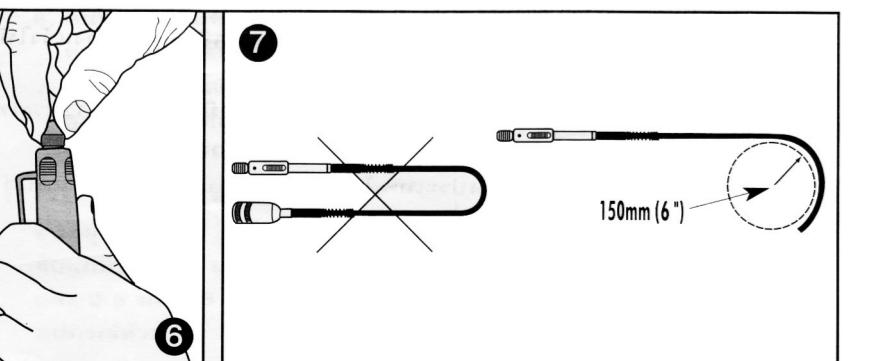
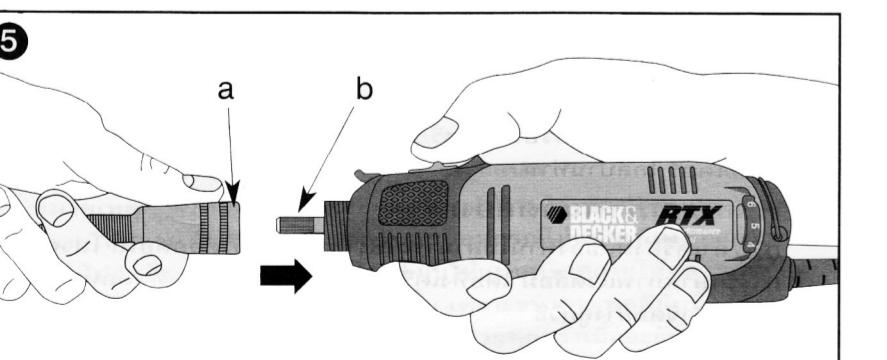
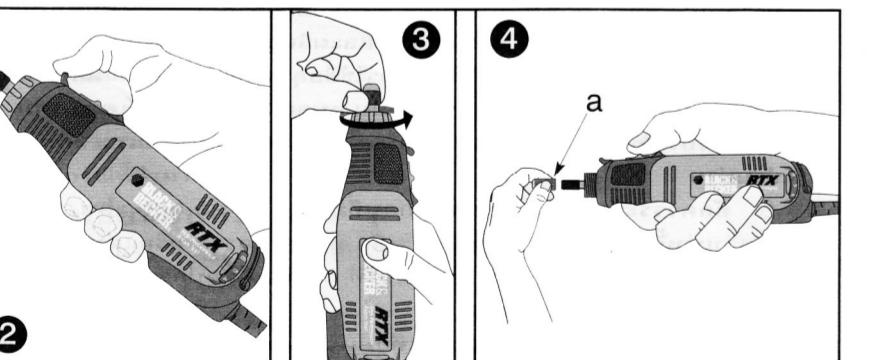
RTX

www.blackanddecker.com



This manual is applicable for -B1 & -TW

P/N: 90582347



KEY INFORMATION YOU SHOULD KNOW:

- Do not tighten the collet nut (Fig. 1a) without an accessory bit in place.
- Do not engage spindle lock (Fig. 1c) until tool has come to a complete stop.

SAVE THIS MANUAL FOR FUTURE REFERENCE.

GENERAL SAFETY RULES

WARNING: Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

WORK AREA

- Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
 - Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Power tools create sparks which may ignite the dust or fumes.
 - Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.
- ELECTRICAL SAFETY**
- Double Insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double Insulation eliminates the need for the three wire grounded power cord and grounded power supply system.
 - Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is grounded.
 - Don't expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
 - Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
 - When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W". These cords are rated for outdoor use and reduce the risk of electric shock.

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- Remove adjusting keys or wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

- Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
- Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
- Do not use tool if switch does not turn it on or off. Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the tool from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edges are less likely to bind and are easier to control.
- Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

SERVICE

- Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

- Accessories must be rated for at least the speed recommended on the tool warning label. Tools and other accessories running over rated speed can fly apart and cause injury. The label on your tool may include the following symbols:

V volts	A amperes
Hz hertz	W watts
min minutes	~ alternating current
..... direct current	No no load speed
□ Class II Construction	⊕ earthing terminal
△ safety alert symbol	.../min revolutions or reciprocations per minute

ADDITIONAL SAFETY RULES FOR ROTARY TOOLS

ALWAYS WEAR EYE PROTECTION WHEN USING THIS TOOL!

- If accessory jams, turn tool off and disconnect from power supply before freeing accessory from the jam.
- Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- When using cutoff wheels always have the work securely clamped. Never attempt to hold the work with one hand while using any cutting accessory.
- Keep hands away from rotating accessories.
- Allow accessories and collets to cool before touching with bare hands. They will be hot after using.
- Ensure there are no foreign objects in the workpiece such as nails which if hit could cause loss of control of unit.
- Always feed the cutter into the material in the same direction as the chips are being thrown. Feeding the tool in the wrong direction can cause loss of control.
- Keep handles dry, clean, free from oil and grease. This will enable better control of the tool.
- When cutting wood, extra care should be taken to avoid inhalation and minimize skin contact.
- Wear ear protection. Noise level may be amplified when using tool in enclosed spaces.
- The RTX has an internal speed control, never use an external speed control on this unit.
- Do not use worn accessories.
- Do not use grinding wheels that have cracks.
- When turning tool on, hold it away from your face, since a damaged accessory could come apart.

- WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
- lead-based paints,
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber (CCA).
- 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 those dust masks that are specially designed to filter out microscopic particles.

USE OF EXTENSION CORDS

- Make sure the extension cord is in good condition before using. Always use the proper size extension cords with the tool - that is, proper wire size for various lengths of cord and heavy enough to carry the current the tool will draw. Use of an undersized cord will cause a drop in line voltage resulting in loss of power and overheating.
- SPINDLE LOCK LEVER**
- TURN OFF AND UNPLUG TOOL FROM POWER SUPPLY.**
- To lock the spindle for changing accessories, pull back on the spindle lock lever (Fig. 1c) as shown in Figure 2. With the lever in the full back position the spindle will lock. Install or remove the accessories as directed in this manual. Release the spindle lock lever and you're finished.

ON/OFF SWITCH

To turn the tool ON, slide the on/off switch (Fig. 1d) button forward. The tool will immediately run at the speed which is selected. Do not attempt to start tool with spindle lock engaged. It will not run.

SPEED SELECTION

To operate the tool, select the speed setting you wish with the speed wheel (Fig. 1e) and slide the ON/OFF switch (Fig. 1d) forward. The speed setting can be adjusted either with the tool on or off.

CAUTION: Because the RTX has a separate speed wheel for setting the speed (8,000 - 30,000 RPM), the tool will start at the speed where the speed wheel is set. Be sure switch is fully OFF before plugging in.

The numbered positions, 1 through 6 inscribed on the switch speed wheel, do not indicate any precise speed but are good reference points. The higher the number, the higher the tool speed.

The approximate speed at each setting is:

SETTING	1	2	3	4	5	6
APPROX. SPEED	8,000	12,000	19,000	24,000	28,000	30,000

(Actual RPM's on your tool may vary)

Be sure to select the proper speed for your rotary tool operate. The following chart provides a speed guide for various operations.

If in doubt about the proper speed for your operation, test the performance at low speed setting and gradually increase until a comfortable speed is found.

Cutting 5-6 Deburring 4-5

Sanding Wood 5-6 Stripping Metal 4-5

Sharpening 3-5 Engraving Metal 4-5

Polishing 1-2 Drilling Holes 4-5

Removing Rust 1-2

CAUTION: Never exceed the speed rating of the accessory being used.

CHANGING ACCESSORIES

Accessories are held in place by a collet (Fig. 1h) and collet nut (Fig. 1a).

To insert an accessory:

- Turn off tool, allow it to come to a complete stop and disconnect from the power supply.

- Pull back on the spindle lock lever (see Fig. 2) and grasp the collet nut (Fig. 1a).

- Turn the collet nut counter-clockwise as shown in Fig. 3 until it is loose.

- Insert the new accessory into the collet as far as it will go.

- Tighten (clockwise) the collet nut securely. **NOTE:** The collet was designed to be hand tightened and loosened only. Accessories naturally self tighten during use. A wrench is provided with the tool for loosening. You should never need to tighten the collet nut with the wrench. If a wrench is needed, use only the wrench provided. Do not use tools that will mar the finish and could break the collet. Always ensure there is some accessory in the collet before tightening. Tightening an empty collet can crack it.

- Release the spindle lock lever and you're finished.

CHANGING THE COLLET

Some accessories require different sized collets. The two collets used with Black & Decker accessories are 3mm (1/8") (used for most accessories) and 2.5mm (3/32"). Ensure your collet size matches your accessory.

To change the collet:

- Turn off tool, allow it to come to a complete stop and disconnect from power supply.

- Pull back on the spindle lock lever (see Fig. 2) and grasp the collet nut.

- Turn the collet nut counter-clockwise and remove the collet nut and the collet from the threaded spindle (Fig. 1b).

- Insert the new collet into the spindle.

- Screw on the collet nut.

- Release the spindle lock.

USING THE ROTARY TOOL

WARNING: Always wear eye protection.

When operating the tool be sure to hold it securely. For detail work, grip the contoured area at the front of the tool, near the spindle. Before beginning a project, practice using the tool on some scrap material until you get the "feel" of the tool. The rotary tool is small and easy to use but don't be fooled; it's a real power tool and should be handled carefully and properly as described in this manual. Don't overload the tool. Performance is enhanced by letting the tool do the work.

FLEXIBLE SHAFT RTX5100 FLEXIBLE ROTARY TOOL EXTENDER

(Available as a separate accessory and included with catalog number RTX-2 only.)

FLEXIBLE SHAFT INSTALLATION INSTRUCTIONS

- Turn off tool, allow it to come to a complete stop and disconnect from power supply.
- Remove the collet nut and collet from the tool by first pulling back on the spindle lock lever and grasping the collet nut (Fig. 2).
- Turn the collet nut counter-clockwise and remove the collet nut and the collet from the threaded spindle (see Fig. 3). Release the spindle lock.
- Remove the silver housing cap (Fig. 1g) by turning counter-clockwise.
- Locate the driver nut (Fig. 4a) and thread it onto the motor shaft (Fig. 4).
- Screw the FLEXIBLE SHAFT (Fig. 5a) onto the rotary tool as shown in Fig. 5 insuring that the rotating center core engages the square hole socket in the driver nut (Fig. 5b). **NOTE:** Use caution when screwing the metal housing of the shaft onto the threaded portion of the rotary tool. Avoid cross threading.

The FLEXIBLE SHAFT is now ready for use. To insert an accessory, Turn off tool, allow it to come to a complete stop and disconnect from power supply. Place the provided lock pin into the opening in the FLEXIBLE SHAFT hand piece and rotate collet nut until lock pin engages in the threaded hole (Fig. 6). When the shaft locked, turn the collet nut counter-clockwise to loosen. Insert the accessory completely into the collet to avoid wobbling. Tighten collet nut securely by hand. Remove lock pin.

8. The FLEXIBLE SHAFT collet can be changed as described in the "Changing the Collet" section.

IMPORTANT: Avoid using the FLEXIBLE SHAFT with a sharp bend as shown in Fig. 7. A radius of 152mm (6") or larger is recommended. A tool hanger (Fig. 1h) is provided to hang the tool when using the flex shaft. The hanger secures the tool and helps avoid sharp bends on the flex shaft.

NOTE: The rotating center core can come out of the FLEXIBLE SHAFT. This is not a problem. Simply reinset it into the FLEXIBLE SHAFT. If the center core gets dirty, wipe it off and apply a very light film of high temperature grease. The square drive of the center core may not engage the hand piece. To get it to engage, apply a light force to the tip of the center core while rotating the handpiece collet.

9. The FLEXIBLE SHAFT collet can be changed as described in the "Changing the Collet" section.

IMPORTANT: Avoid using the FLEXIBLE SHAFT with a sharp bend as shown in Fig. 7. A radius of 152mm (6") or larger is recommended. A tool hanger (Fig. 1h) is provided to hang the tool when using the flex shaft. The hanger secures the tool and helps avoid sharp bends on the flex shaft.

NOTE: The rotating center core can come out of the FLEXIBLE SHAFT. This is not a problem. Simply reinset it into the FLEXIBLE SHAFT. If the center core gets dirty, wipe it off and apply a very light film of high temperature grease. The square drive of the center core may not engage the hand piece. To get it to engage, apply a light force to the tip of the center core while rotating the handpiece collet.

10. The FLEXIBLE SHAFT collet can be changed as described in the "Changing the Collet" section.

IMPORTANT: Avoid using the FLEXIBLE SHAFT with a sharp bend as shown in Fig. 7. A radius of 152mm (6") or larger is recommended. A tool hanger (Fig. 1h) is provided to hang the tool when using the flex shaft. The hanger secures the tool and helps avoid sharp bends on the flex shaft.

NOTE: The rotating center core can come out of the FLEXIBLE SHAFT. This is not a problem. Simply reinset it into the FLEXIBLE SHAFT. If the center core gets dirty, wipe it off and apply a very light film of high temperature grease. The square drive of the center core may not engage the hand piece. To get it to engage, apply a light force to the tip of the center core while rotating the handpiece collet.

11. The FLEXIBLE SHAFT collet can be changed as described in the "Changing the Collet" section.

IMPORTANT: Avoid using the FLEXIBLE SHAFT with a sharp bend as shown in Fig. 7. A radius of 152mm (6") or larger is recommended. A tool hanger (Fig. 1h) is provided to hang the tool when using the flex shaft. The hanger secures the tool and helps avoid sharp bends on the flex shaft.

NOTE: The rotating center core can come out of the FLEXIBLE SHAFT. This is not a problem. Simply reinset it into the FLEXIBLE SHAFT. If the center core gets dirty, wipe it off and apply a very light film of high temperature grease. The square drive of the center core may not engage the hand piece. To get it to engage, apply a light force to the tip of the center core while rotating the handpiece collet.

12. The FLEXIBLE SHAFT collet can be changed as described in the "Changing the Collet" section.

IMPORTANT: Avoid using the FLEXIBLE SHAFT with a sharp bend as shown in Fig. 7. A radius of 152mm (6") or larger is recommended. A tool hanger (Fig. 1h) is provided to hang the tool when using the flex shaft.

