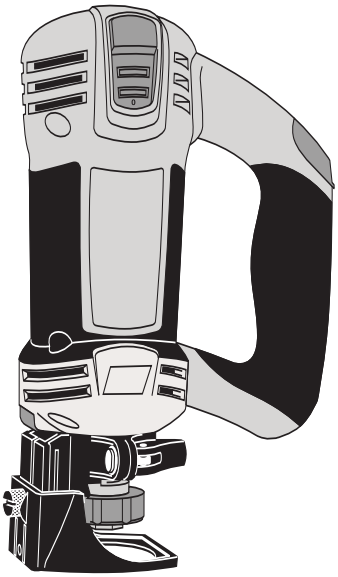
IMPORTANT: Read Before Using	IMPORTANT : Lire avant usage	IMPORTANTE: Leer antes de usar

Operating/Safety Instructions
Consignes de fonctionnement/sécurité
Instrucciones de funcionamiento y seguridad

RZ5
RZ10
RZ20



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For English See page 2	Parlez-vous français? Voir page 18	¿Habla español? Ver página 34

Power Tool 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 by-standers, 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. *Before plugging in the tool, be certain the outlet voltage supplied is within the voltage marked on the nameplate. Do not use "AC only" rated tools with a DC power supply.*

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. If operating the power tool in damp locations is unavoidable, a Ground Fault Circuit Interrupter must be used to supply the power to your tool. Electrician's rubber gloves and footwear will further enhance your personal safety.

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. Refer to "Recommended sizes of Extension Cords" in the Accessory section of this manual.

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. Keep handles dry, clean and free from oil and grease.

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 plug 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. Any alteration or modification is a misuse and may result in a dangerous condition.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools. Develop a periodic maintenance schedule for your tool.

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. For example: internal wires may be misplaced or pinched, safety guard return springs may be improperly mounted.

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. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

Rotary Cutter Safety Rules

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. *If cutting into existing walls or other blind areas where electrical wiring may exist is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.*

Always make sure the work surface is free from nails and other foreign objects. Cutting into a nail can cause the bit and the tool to jump and damage the bit.

Never hold the workpiece in one hand and the tool in the other hand when in use. Never place hands near or below cutting surface. Clamping the material and guiding the tool with both hands is safer.

Never lay workpiece on top of hard surfaces, like concrete, stone, etc... Protruding cutting bit may cause tool to jump.

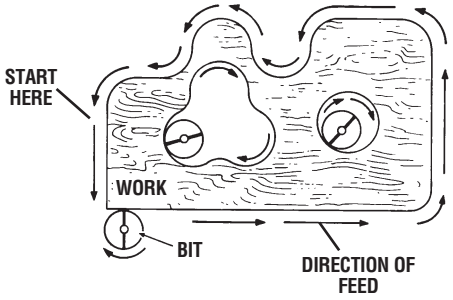
Always wear safety goggles and dust mask. Use only in well ventilated area. Using personal safety devices and working in safe environment reduces risk of injury.

After changing the bits or making any adjustments, make sure the collet nut and any other adjustment devices are securely tightened. Loose adjustment device can unexpectedly shift, causing loss of control, loose rotating components will be violently thrown.

Never start the tool when the bit is engaged in the material. The bit cutting edge may grab the material causing loss of control of the cutter.

Always hold the tool with two hands during start-up. The reaction torque of the motor can cause the tool to twist.

When routing or cutting, the direction of feed with the bit's cutting edge into the material is very important. Always feed the bit into the material in the same direction as the cutting edge is exiting from the material. When viewing the tool from the top, the bit rotates clockwise. If the tool is between the workpiece and you body, then feed the tool to your right. If the workpiece is between the tool and your body, then feed the tool to your left. Feeding the tool in the wrong direction causes the cutting edge of the bit to climb out of the work and pull the tool in the direction of this feed.



Never use dull or damaged bits. Sharp bits must be handled with care. Damaged bits can snap during use. Dull bits require more force to push the tool, possibly causing the bit to break.

Never touch the bit during or immediately after the use. After use the bit is too hot to be touched by bare hands.

Never lay the tool down until the motor has come to a complete standstill. The spinning bit can grab the surface and pull the tool out of your control.

Never use bits that have a cutting diameter greater than the opening in the base.

Do not use the tool for drilling purposes. This tool is not intended to be used with drill bits.

Always use the tool with the depth guide securely attached and positioned flat against material being cut. The guide securely positioned on the material improves the stability and control of your tool.

⚠ 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 from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

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.

Zipmate Abrasive Cut-Off Attachment Safety Rules

Always use wheel guard, and the tool's auxiliary handle with this abrasive cut off tool. The guard must always be securely attached to the tool and positioned for maximum safety, so the least amount of wheel is exposed on the operators side of the tool. A guard protects operator from broken wheel fragments. The support ribs and auxiliary handle provide additional guarding, stability and control in cut off applications. The body of your Rotozip tool or your Zipmate attachment can also be used as a handle.

Always be certain that the wheel guard, and tool's auxiliary handle are reassembled and securely fastened to the tool when changing the point of operation from *fire forward* to *fire reverse* or after changing the wheels. A tool missing an essential safety component is dangerous to operate.

Hold tool by insulated gripping surfaces when performing an operation where the abrasive wheels 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.

Wear proper apparel while using an abrasive cut off tool. Face shield or at least safety goggles, dust mask, leather gloves and shop apron capable of stopping small wheel or workpiece fragments.

This attachment is not intended to be used with Wet Diamond Wheels. Using water or other liquid coolants with this tool may result in electrocution or shock. Use of Dry Diamond Wheels is acceptable.

Use only Type 1 abrasive cut off wheels with the correct size arbor hole. Never use damaged or incorrect wheel flanges or round nut. Other types of wheels are not intended to apply load on periphery and may shatter. Wheels with arbor holes that do not match the mounting hardware of the tool will run eccentrically, vibrate excessively and will cause loss of control.

Do not grind on the side of Type 1 abrasive cut off wheels. Side forces applied to these wheels may cause them to shatter.

Do not use this attachment with "Woodcarving" blade or standard wood cutting toothed blades. These blades are not intended for this tool and can create loss of control during use.

Abrasive Cut Off Wheels must have a maximum safe operating speed greater than the "no load RPM" marked on the attachment. Wheels running over the rated speed can fly apart and cause injury.

Before each use inspect the cut off wheel for chips and cracks. Do not use a wheel that may be damaged. Install a new wheel if tool was dropped. When installing a new wheel carefully handle individual cut off wheels to avoid chipping or cracking. Run the tool at no load for one minute, holding the tool in the direction away from people. Wheels with flaws will normally break apart during this time. Fragments from a wheel that bursts during operation will fly away at great velocity possibly striking you or bystanders.

Do not use a cut off wheel that is larger than the maximum recommended size for your tool, or worn down damaged wheels from larger abrasive cut off tools. Wheels intended for larger tools are not suitable for the higher speed of a smaller tool, these wheels may easily burst and the fragments strike you or bystanders.

Position the cord clear of the spinning wheel. Do not wrap the cord around your arm or wrist. If you lose control and have the cord wrapped around your arm or wrist, it may entrap you and cause injury.

Keep your body positioned to either side of the wheel, but not in line with the wheel. It is important to support the tool properly and to position your body such as to minimize body exposure from the possible wheel binding and the recoil of the tool.

Keep hands away from cutting area and wheel. Keep your second hand on auxiliary handle or the attachment. Hold the tool firmly to prevent loss of control. NEVER place your hand behind the wheel since the tool may recoil over your hand. Do not attempt to remove cut material when wheel is moving. If both hands are holding the tool, they cannot be cut by the wheel

Do not "jam" the abrasive wheel into the work, apply excessive pressure or attempt to use large depths of cut while using this tool. Let the rotating wheel do the work, Abrasive Cut Off Tools are intended to "cut" the material in a series of shallow depth of cuts. See the instructions for depth of cut later in this manual.

Avoid bouncing and snagging the wheel, especially when working corners, sharp edges etc. This can cause loss of control and tool's recoil.

Do not run the tool while carrying it at your side. Accidental contact with the spinning wheel could result in serious personal injury.

Never lay the tool down until the motor has come to a complete standstill. The spinning wheel can grab the surface and pull the tool out of your control.

Do not use the Zipmate near flammable materials. Sparks from the wheel could ignite these materials.

Never cut or attempt to cut magnesium with this attachment. The dust generated when cutting magnesium is highly flammable and may be explosive under certain conditions.

Regularly clean the tool's air vents by compressed air. Excessive accumulation of powdered metal inside the motor housing may cause electrical failures.

Causes and Operator Prevention of Recoil:

Recoil *is a sudden reaction to a pinched, bound or misaligned rotating wheel. The wheel may stall and cause an uncontrolled tool to* ***back out*** *of the kerf toward the operator when the tool is in the "fire forward" position, if the tool is set in the "reverse fire" position the tool may tend to* ***walk away*** *from the operator. The rotation direction arrow located on the back side of the guard can be used to identify the "fire forward" and "reverse fire" positions. The attachment is in the fire forward position when the directional arrow points toward the operator, and it is in the reverse fire position when the arrow is pointing away from the operator.*

If an abrasive wheel or diamond wheel becomes twisted or misaligned in the cut, the side of the wheel that is entering into the material can dig into the top surface of the material causing the wheel to ***climb out or recoil out*** *of the kerf either toward or away from the operator, depending on the* ***fire forward or reverse fire*** *orientation.*

Abrasive wheels may also shatter under these conditions causing pieces or fragments to strike or impale the operator and bystanders. Recoil or shattered wheels are the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

Maintain a firm grip with both hands on the tool handles and position your body and arm to allow you to resist *recoil* forces. *Recoil* forces can be controlled by the operator, if proper precautions are taken.

When wheel is binding, or when interrupting a cut for any reason, slowly ease the wheel out of the material while maintaining a firm grip on the tool and auxiliary handle with both hands. Investigate and take corrective action to eliminate the cause of wheel binding.

When restarting a tool in a workpiece, center the wheel in the kerf and check that the sides of the wheel are not engaged into the material. If wheel is binding, it may walk up or *recoil* from the workpiece as the tool is restarted.

Support large panels to minimize the risk of wheel pinching and *recoil.* Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.

Use extra caution when making a "Pocket Cut" into existing walls or other blind areas. The protruding wheel may cut objects that can cause *recoil.*

⚠ 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 from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

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.

Symbols

IMPORTANT: Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol	Name	Designation/Explanation
V	Volts	Voltage (potential)
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
kg	Kilograms	Weight
min	Minutes	Time
s	Seconds	Time
Ø	Diameter	Size of drill bits, grinding wheels, etc.
n_0	No load speed	Rotational speed, at no load
.../min	Revolutions or reciprocation per minute	Revolutions, strokes, surface speed, orbits etc. per minute
0	Off position	Zero speed, zero torque...
1, 2, 3, ... I, II, III,	Selector settings	Speed, torque or position settings. Higher number means greater speed
0 ◢	Infinitely variable selector with off	Speed is increasing from 0 setting
→	Arrow	Action in the direction of arrow
∿	Alternating current	Type or a characteristic of current
⎓	Direct current	Type or a characteristic of current
≂	Alternating or direct current	Type or a characteristic of current
⧈	Class II construction	Designates Double Insulated Construction tools.
⏚	Earthing terminal	Grounding terminal
⚠	Warning symbol	Alerts user to warning messages
RECYCLE RBRC Ni-Cd 1-800-822-8837	Ni-Cad RBRC seal	Designates Ni-Cad battery recycling program

This symbol designates that this tool is listed by Underwriters Laboratories.

This symbol designates that this tool is listed to Canadian Standards by Underwriters Laboratories.

This symbol designates that this tool complies to NOM Mexican Standards.

This symbol designates that this tool is listed by the Canadian Standards Association.

This symbol designates that this tool is listed by Underwriters Laboratories, and listed to Canadian Standards by Underwriters Laboratories.

Functional Description and Specifications

⚠ 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.

Spiral Saw™

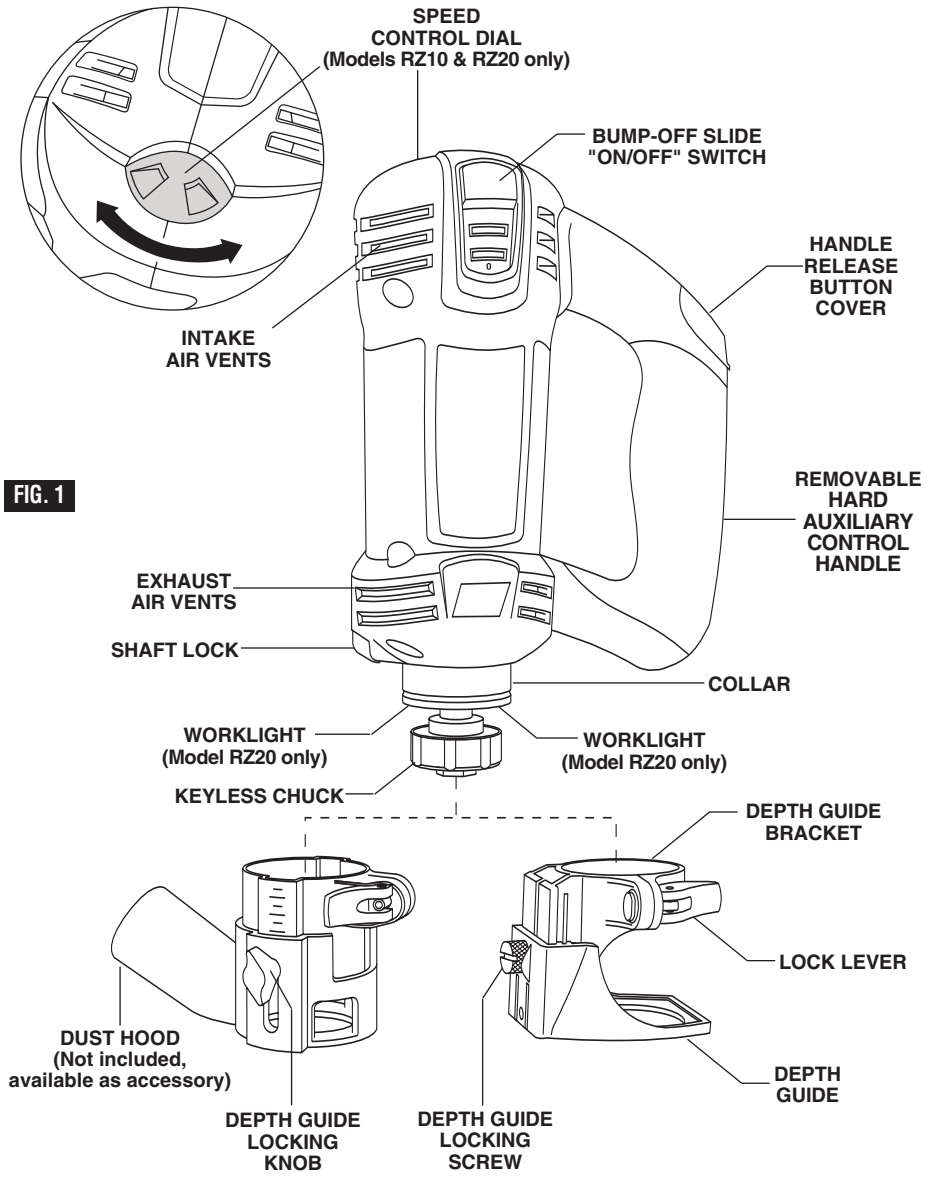


FIG. 1

NOTE: For tool specifications refer to nameplate on your tool.

Assembly

⚠ 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. Make certain that the collet nut is securely tightened before turning the tool on.

REMOVING AND INSTALLING THE DEPTH GUIDE ASSEMBLY

The depth guide assembly consists of the depth guide, locking screw and bracket.

In order to remove the depth guide from the tool, release the locking lever and pull the entire assembly straight off of the tool. To reattach the assembly, fully replace the guide onto the tool collar and lock the clamp lever (Fig. 1).

REMOVING AND INSTALLING THE DUST HOOD ASSEMBLY (Not included, available as accessory)

The dust hood is sized to accept 35mm vacuum hoses.

The dust hood assembly consists of the dust hood, locking knob and bracket.

In order to remove the dust hood assembly from the tool, release the locking lever and pull the entire assembly straight off of the tool. To reattach the assembly, fully replace the guide onto the tool collar and lock the clamp lever (Fig. 1).

INSTALLING BITS

The bits are held by a keyless collet system designed specifically for spiral saw bits with 1/8" (.125"), 1/4" (.250") or 5/32" (.156") shanks.

⚠ WARNING The bit flutes are sharp and should be handled with caution.

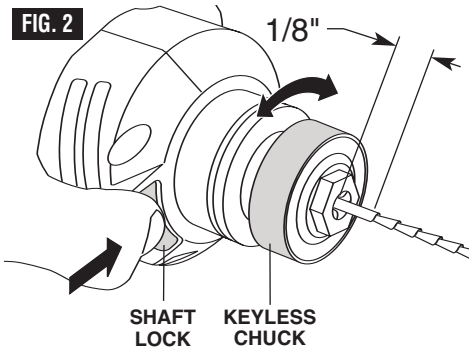
Depress and hold the shaft-lock in and rotate the keyless chuck and shaft until the shaft-lock engages and holds the shaft.

⚠ CAUTION **To prevent damage to tool.** Never use the shaft lock as a braking devise to stop the tool from rotating.

Rotate the keyless chuck (counter-clockwise) (Fig. 2). Remove the old bit (if there is one) insert the new bit as far as possible, but not so far that the bit flutes engage the jaws of the chuck (leave approximately 1/8" of shank exposed) Re-engage the shaft-lock and securely tighten the keyless chuck (clockwise) by hand.

Note: When using 1/4" and 5/32" bits it may be necessary to use a wrench on the front of the keyless chuck to securely tighten the bit.

FIG. 2

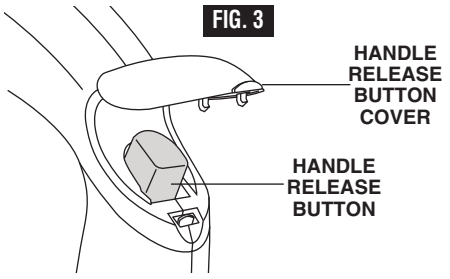


REMOVING AND INSTALLING THE HARD AUXILIARY CONTROL HANDLE

Turn the tool OFF and unplug it. Firmly grasp the tool. Lift open handle release button cover, depress release button and remove handle (Fig. 3).

Gently engage the two (2) front latches on handle into the tool and push handle until it snaps securely into place.

FIG. 3



Operating Instructions

BUMP-OFF SLIDE "ON/OFF" SWITCH

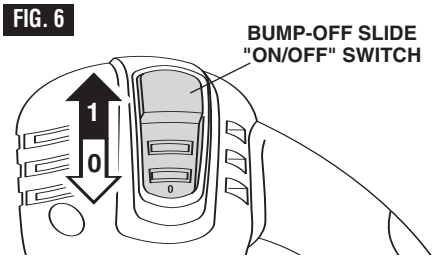
This tool is switched "ON" by the slide switch located on the front of the motor housing (Fig. 6).

TO TURN THE TOOL "ON" slide the switch button up.

TO TURN THE TOOL "OFF" slide the switch button down or "0" position.

⚠ WARNING Hold the tool with both hands while starting, since torque from the motor can cause the tool to twist.

FIG. 6



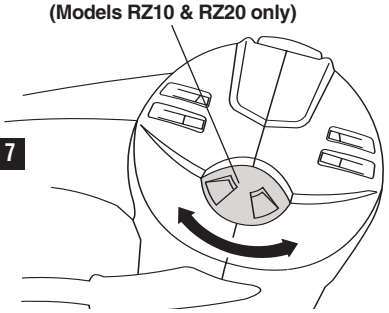
ELECTRONIC VARIABLE SPEED CONTROL (Models RZ10 & RZ20 only)

The electronic speed control feature allows motor speed to be matched to cutter size and material hardness for improved finish, extended bit life, and higher performance. Speed changes are achieved by rotating Control Dial RIGHT to increase speed, LEFT to decrease as indicated on housing (Fig. 7).

Speed may be changed while tool is on. The reference numbers on the dial facilitate re-setting control to desired speed.

VARIABLE SPEED CONTROL DIAL (Models RZ10 & RZ20 only)

FIG. 7



For best results, when using RZ bits, we recommend only using dial setting 25 or 30. You will not obtain a quality cut if you lower the dial setting to 15 or 20.

DIAL SETTING	APPLICATION
15	Not Recommended
20	Not Recommended
25	All Materials
30	All Materials

DEPTH GUIDE ADJUSTMENT

Use the depth guide to adjust the depth of cut. Using the end of the standard wrench, loosen (counter clockwise) the screw enough to enable the depth guide to slide up or down to the desired depth of cut (about 1/8" greater than material thickness) and retighten the locking screw (clockwise) (Fig. 8).

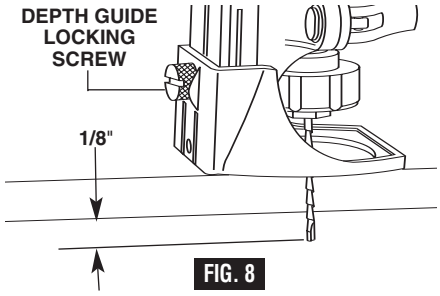


FIG. 8

WORKLIGHT (Model RZ20 only)

Your tool is also equipped with a light that turns on automatically when the switch is activated, for better visibility when cutting (Fig. 1).

MAKE A FEW PRACTICE CUTS

After installing the Zip Bit into the tool and adjusting your depth guide, you should make a few practice cuts with the tool before attempting an actual job.

A few exercises will give you the necessary practice to make clean, professional cuts.

Step 1
Make certain that the collet nut is securely tightened before turning the tool on.

Step 2
Hold the tool firmly and turn the tool ON to your desired speed.

IMPORTANT USER TIP

Step 3
While holding the tool firmly, insert the Zip Bit into the material at a 45° angle (Fig. 9).

Step 4
Slowly bring it to a 90° angle to begin the cut (Fig. 10). The base guide should be flush to the material surface. For all materials (EXCEPT cutting around outlet boxes in drywall), steer the tool in a clockwise direction with slow, steady pressure to make the cut.

Step 5
After completing your cut, turn off the tool and carefully remove it from the material.

Do not attempt to use this tool to make cut-outs around any fixture or opening which has live electrical wires, or any wall which may have live electrical wiring behind it, as the Zip Bit could conduct current to the tool, creating an electrocution hazard for the operator. Shut off breakers or remove fuses to disconnect the circuit. Always hold the tool by its thermoplastic housing, and always wear eye protection when operating a Spiral Saw power tool.

NOTE: Because of the rotating cutting action of the Zip Bit, there will be a slight pull when cutting. The slower you cut, the more control you have. Excessive pressure or fast cutting will cause excessive heat and may shorten the life of the Zip Bit.

NOTE: When cutting on a vertical surface, avoid ending your cut at the bottom of the hole. If possible, start and end your cut at the top so the scrap part will not drop onto the rotating Zip Bit. Turn the tool off and remove it from the material.

FIG. 9

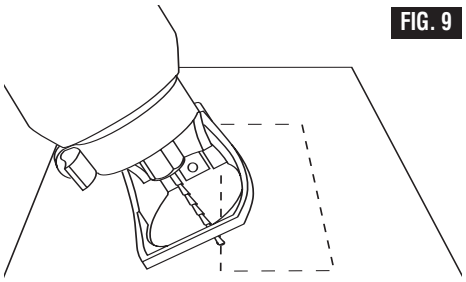
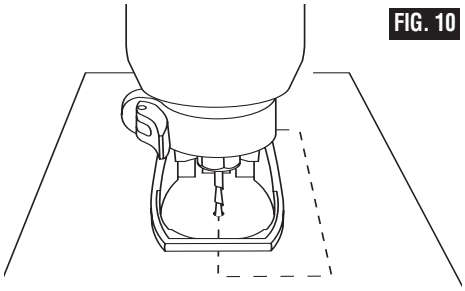


FIG. 10



MAKING DRYWALL CUT OUTS

After assembling the bit into the tool as described earlier, it will be necessary to review the instructions provided below and make some practice cut-outs with this tool before attempting an actual job. The best method is to take some scrap pieces and nail or screw them in place over wall studs which have an electrical box or other feature in place. A few such exercises will give you the necessary practice to make clean, professional cutouts around whatever is behind the drywall you are installing.

⚠ WARNING Do not attempt to use this tool to make cut-outs around any fixture or opening which has live electrical wires, or on any wall which may have live electrical wiring behind it, as the bit could conduct current to the tool, creating an electrocution hazard for

the operator. Shut off breakers or remove fuses to disconnect the circuit. Always hold the tool by its thermoplastic housing, and always wear eye protection when operating this device.

Step 1: Be certain that the box or fixture which requires a cut-out is firmly mounted and all wires or other obstructions around the opening are pushed back out of the way. The drywall cut-out bit uses the outer edge of the box or fixture as a guide, so it is important that there is nothing in the way which can prevent it from guiding completely around the opening. For the purposes of this instruction manual, the procedure discussed will be to make a cut-out around a standard 2 1/8" x 3 3/4" electrical box.

Step 2
Slide switch to turn the tool on. While holding the Spiral Saw power tool firmly with both hands plunge the Zip Bit through the mark you made. Then guide the Zip Bit to the right until you feel and hear the Zip Bit touch the inside edge of the box.

Step 3
Pull the Zip Bit out far enough to slip it over the edge of the box so it is now against the outside of the box.

Step 4
While keeping the Zip Bit in contact with the outside of the box move the tool counter clockwise while applying light inward and upward pressure until you feel and hear it come to the corner. As you round the corner apply light pressure left and downward.

Step 5
While moving slowly and continuously along the top contour you will feel the Zip Bit come to the next corner. Round the corner and apply light down and inward pressure until the bottom corner is reached.

Step 6
Move the Zip Bit right and upward maintaining light continuous pressure toward the box.

Step 7
Round the right bottom corner and begin moving the bit upward while applying light pressure left toward the box until you meet initial upward cut. Push Spiral Saw power tool switch to off.

Step 8
The completed box, executed quickly, neatly and in a fraction of the time taken by other methods.

These step-by-step instructions are generalized to acquaint you with the Spiral Saw power tool operation. After some practice, you may develop a motion technique with which you are more comfortable. However, you must always begin the cut somewhat centrally, and MOVE THE SPIRAL SAW POWER TOOL ONLY COUNTERCLOCKWISE to take advantage of the “hugging” action of the rotating Zip Bit along the contours of the template. Remember to use a smooth continuous motion.

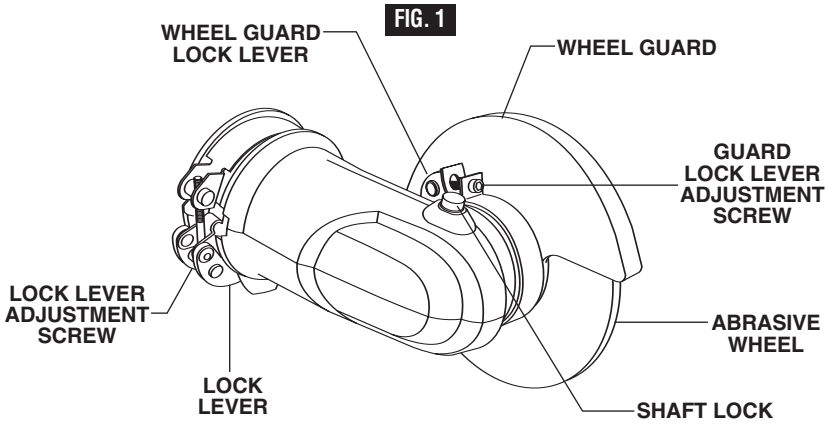
Functional Description and Specifications

⚠ WARNING **Zipmate attachment must be used only with an hard auxiliary control side handle.** Two handed control of solid gripping handles will provide sufficient control of the cutting wheel in case of recoil.

⚠ 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.

Zipmate® Abrasive Cut Off Attachment

FIG. 1



Recommended for use with: Rebel, Revolution, and all RZ model Rotary Tools.

⚠ WARNING Hard auxiliary control handle must be obtained for models RZ1 and RZ25. Call **1-877-ROTOZIP.**

Note : The speed of your tool will be reduced 2 : 1 when using your Abrasive Cut-Off attachment.

Assembly

⚠ WARNING **Always use auxiliary handle for maximum control over torque reaction or kick-back.** Operation of the tool without the auxiliary handle could cause loss of control of the tool, resulting in possible serious personal injury.

REMOVING AND INSTALLING ABRASIVE CUT OFF ATTACHMENT

⚠ 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. Make certain that the keyless chuck is securely tightened before turning the tool on.

1. Depress and hold the shaft-lock in and rotate the keyless chuck and shaft until the shaft-lock engages and holds the shaft (Fig. 2).

2. Rotate the keyless chuck (counter-clockwise) until chuck it is completely open.

3. Insert drive pin into the keyless chuck up to the flange, and securely tighten chuck.

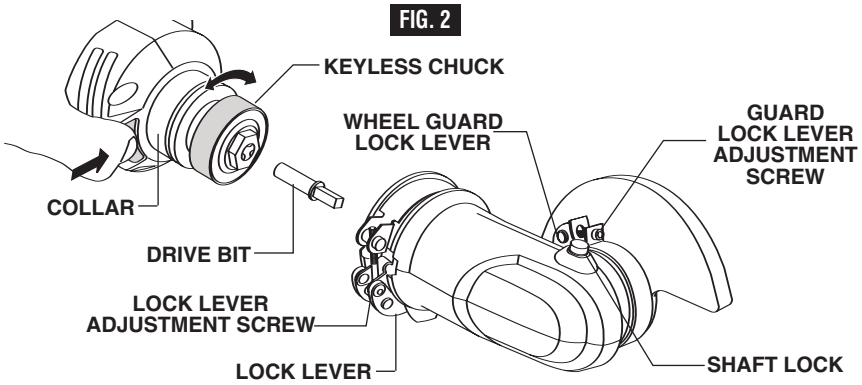
4. Open locking lever and position attachment onto the collar. Note: It may be necessary to rotate attachment slightly and hold both the tool and attachment shaft locks to engage square end of drive bit into attachment.

5. Position attachment as shown and lock the lock lever.

Use the allen wrench to adjust the lock lever adjustment screw.

⚠ CAUTION Overtightening the lock lever adjustment screw can permanently damage the locking mechanism. Test the tightness of the lever after each full turn of the adjustment screw.

FIG. 2



INSTALLING ABRASIVE WHEELS

Always use the arbor nut that has same thread size as the output shaft.

1. Install abrasive wheel onto output shaft.

2. Thread arbor nut provided onto output shaft finger tight, depress shaft lock and tighten wheel with the wrench provided (Fig. 3).

⚠ WARNING **Do not overtighten.** Cracks in the wheel can occur if overtightened. Use wrench provided with tool. Other wrenches may promote overtightening.

⚠ WARNING **Do not depress shaft lock while the tool is running.** Depressing the shaft lock may cause wheel to spin off or damage to attachment.

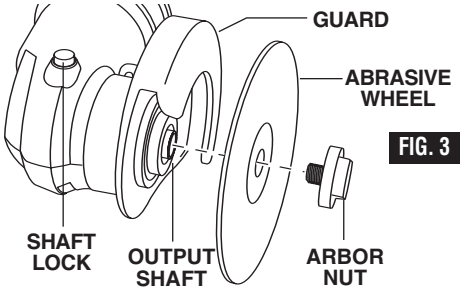


FIG. 3

Operating Instructions

MAKING A CUT

1. Make sure material being cut is secured in a vise or fixture before attempting to cut.

2. Keep your body positioned to either side of the wheel, but not in line with wheel. It is important to support the tool properly and to position your body such as to minimize body exposure from possible wheel binding and recoil.

3. Grip the tool with both hands when cutting and always be ready and able to manage the cut.

4. Avoid jamming, twisting or pinching the wheel with the workpiece or otherwise applying excessive side pressure to the wheel.

5. Keep guard covering between wheel and user.

6. Make sure the guard lock lever is in the closed position and the guard is securely mounted to the attachment. Use the allen wrench to adjust the guard adjustment screw.

7. Maximum cutting depth is 11/16”.

⚠ CAUTION Overtightening the guard adjustment screw can permanently damage the locking mechanism. Test the tightness of the lever after each full turn of the adjustment screw.

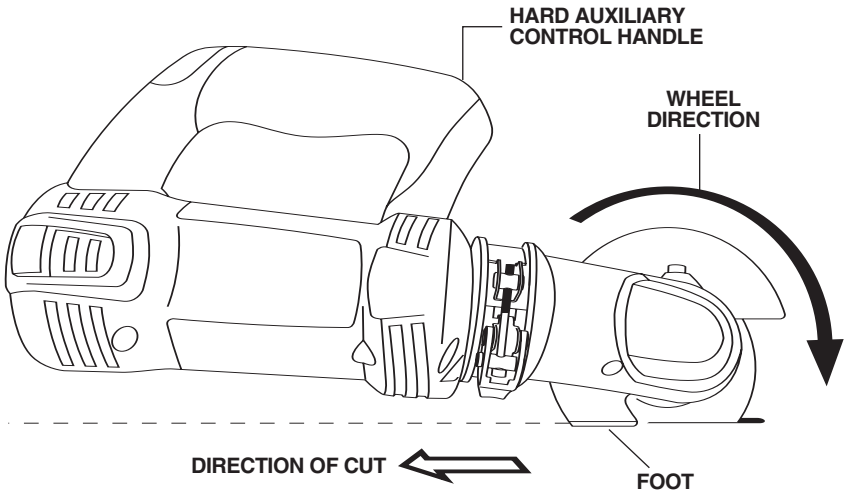
⚠ WARNING To prevent recoil and damage to the tool, always ensure that the inner or outer flanges never contacts the workpiece surface.

8. Generally, the harder the material being worked on, the faster the wheel will wear.

9. When cutting thicker material, never make the cut in one pass. Make successive passes until you reach desired depth.

10. When using the Diamond Wheel, do not make long, continuous cuts. Allow the blade to cool for approximately 10 seconds for each minute cutting.

FIG. 4



APPLICATIONS

This tool is intended for cutting the following materials.

1/8″ maximum thick sheet steel.

Floor and wall tile.

Concrete cinder blocks and bricks.

Reinforcing rod-generally under 5/8″ diameter.

1/8″ concrete wire mesh.

Electrical conduit 1/8″ wall thickness.

1/8” maximum thick structural forms such as: channels, angles, plate and etc.

ATTENTION: If you run the tool continuously for more than 5 minutes, it is normal for the housing to feel warm.

It is important to read and understand the section in this manual called “Causes and Operator Prevention of Recoil”.

When making a cut in sheet metal, masonry, etc.: You may start your cut at the end of the piece or you can plunge cut somewhere in the body of the material.

In order to try to avoid recoil (a situation where the wheel wants to skip out of the material) it is recommended to make cuts in the same direction as the rotation of the wheel (Fig. 4).

Maintenance

Service

⚠ WARNING **Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause serious hazard.** We recommend that all tool service be performed by a Bosch Factory Service Center or Authorized Bosch Service Station.

TOOL LUBRICATION

Your Bosch tool has been properly lubricated and is ready to use. It is recommended that tools with gears be regreased with a special gear lubricant at every brush change.

CHUCK LUBRICATION

The wrenchless chuck has been properly lubricated and is ready to use. If the chuck's jaws begin to stick during use, the chuck requires lubrication. To lubricate the chuck, first remove debris from the inside of the chuck with compressed air. Apply a pea-sized amount of general-purpose grease to the sides of the jaws, and adjust the chuck through its full range of motion to distribute the grease.

CARBON BRUSHES

The brushes and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend every two to six months the brushes be examined. Only genuine Bosch replacement brushes specially designed for your tool should be used.

BEARINGS

After about 300-400 hours of operation, or at every second brush change, the bearings should be replaced at Bosch Factory Service Center or Authorized Bosch Service Station. Bearings which become noisy (due to heavy load or very abrasive material cutting) should be replaced at once to avoid overheating or motor failure.

Cleaning

⚠ WARNING **To avoid accidents always disconnect the tool from the power supply before cleaning or performing any maintenance.** The tool may be cleaned most effectively with compressed dry air. **Always wear safety goggles when cleaning tools with compressed air.**

Ventilation openings and switch levers must be kept clean and free of foreign matter. Do not attempt to clean by inserting pointed objects through openings.

⚠ CAUTION **Certain cleaning agents and solvents damage plastic parts.** Some of these are: gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents that contain ammonia.

Extension Cords

⚠ WARNING **If an extension cord is necessary, a cord with adequate size conductors that is capable of carrying the current necessary for your tool must be used.** This will prevent excessive voltage drop, loss of power or overheating. Grounded tools must use 3-wire extension cords that have 3-prong plugs and receptacles.

NOTE: The smaller the gauge number, the heavier the cord.

RECOMMENDED SIZES OF EXTENSION CORDS 120 VOLT ALTERNATING CURRENT TOOLS

Tool's Ampere Rating	Cord Size in A.W.G.				Wire Sizes in mm^2			
	Cord Length in Feet				Cord Length in Meters			
	25	50	100	150	15	30	60	120
3-6	18	16	16	14	0.75	0.75	1.5	2.5
6-8	18	16	14	12	0.75	1.0	2.5	4.0
8-10	18	16	14	12	0.75	1.0	2.5	4.0
10-12	16	16	14	12	1.0	2.5	4.0	—
12-16	14	12	—	—	—	—	—	—

Accessories & Attachments

⚠ WARNING Use only Robert Bosch Tool Corporation's recommended accessories with this tool. Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Attachments that are compatible with Rotozip Spiral Saws are the following:
(Items may be sold separately)

Abrasive Cut Off Attachment
Dust Hood
Circle Cutting Guides
Straight Edge Guide
Plunge Router
Jigsaw Handle
Flex Shaft

Zip® Bits
Robert Bosch Tool Corporation's patented line of versatile Zip Bits and accessories provide you with the flexibility to quickly move from one material to another and one job to another, without the hassle of changing tools.

SC5
TC1
DC1
GP10
ZB10
WD1
FBR1

ZIP BIT CHART Materials	SC5	TC1	DC1	FBR1	GP10	ZB10	WD1
Acoustic Tile	●						
Acrylic	●						
Aluminum Siding	●						
Cement Board		●	●				
Ceramic Wall Tile		●					
Drywall					●	●	●
Fiberglass	●						
Fiberock				●			
Foam Board	●						●
Hardwood	●						
Laminates	●						
Lath	●						
Marble		●					
O.S.B.	●						
Plaster		●	●				
Plastics	●						
Plywood	●						
Solid Surface Material	●						
Stucco		●	●				
Underlayment	●						
Vinyl Siding	●						
Wood	●						
Wood Composites	●						

RZmas2
Masonry Cut-off Wheel
For brick, cement, cinder block, concrete, stone, limestone, composition board, fiberglass, laminates.

RZmet2
Metal Cut-off Wheel
For ferrous metals, angle iron, gutters, iron, pipe, sheet metal, stainless steel.

RZdia1
Dry Diamond Wheel
For floor tile, concrete, stone, ceramic tile, and other very-hard non-metal material.