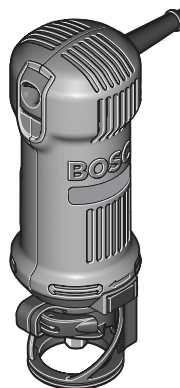


**IMPORTANT:** Read Before Using      **IMPORTANT :** Lire avant usage      **IMPORTANTE:** Leer antes de usar



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

1639



**BOSCH**

**Consumer Information**  
**Renseignément des consommateurs**  
**Información para el consumidor**

Toll Free Number:      Appel gratuit :      Número de teléfono gratuito:  
 1-877-BOSCH99 (1-877-267-2499) <http://www.boschtools.com>

For English      Parlez-vous français?      ¿Hable español?  
 See page 2      Voir page 12      Ver página 22

**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.

**cutting must be counter-clockwise.** NOTE: Inside and outside cuts will require different feed direction, refer to section on feeding the router. 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.

### 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
∅	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
	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
	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.

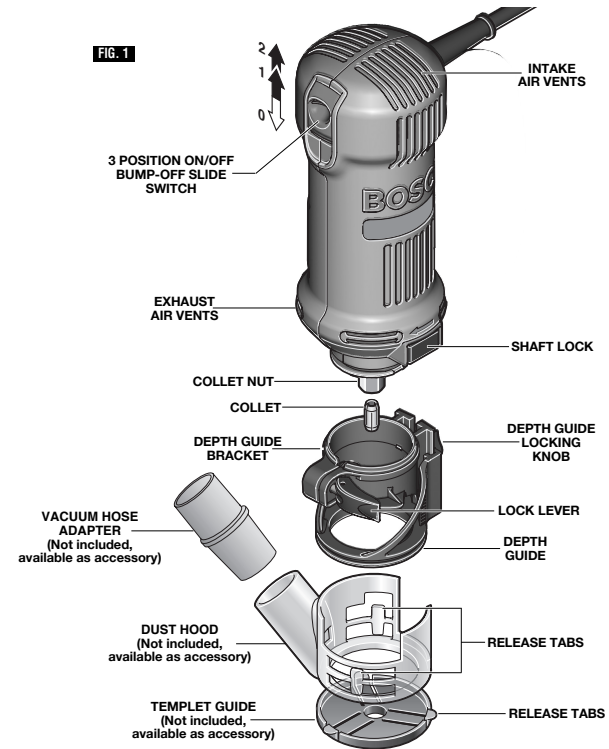
This symbol designates that this tool is listed by the Canadian Standards Association.

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.

#### Rotary Cutter



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

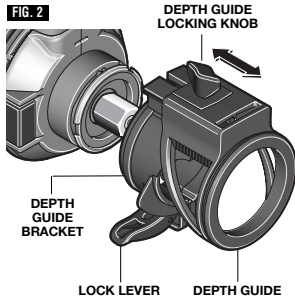
## Assembly

**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 knob 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. 2).



### INSTALLING BITS

The bits are held by a collet system. Use either the 1/8" or 1/4" collet depending on the size of the bit shank.

Do Not Use .118" shank bits in the 1/8" collet use only BOSCH "SC" series bits or similar bits with 1/8" (.125") or 1/4" (.250") shanks.

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

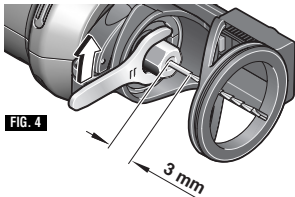
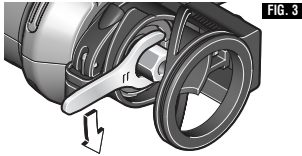
Depress and hold the shaft-lock in and rotate the collet nut and shaft until the shaft-lock engages and holds the shaft.

**CAUTION** To prevent damage to tool. Never use the shaft lock as a braking device to stop the tool from rotating. Use the standard equipment wrench to loosen nut (counter-clockwise) (Fig. 3). 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 collet (leave approximately 1/8" of shank exposed). Re-engage the shaft-lock and tighten the nut (clockwise) by hand and then with the wrench until bit is held securely (Fig. 4).

### CHANGING THE COLLET

The 1/8" collet is used with 1/8" diameter bits and the 1/4" collet is used with 1/4" diameter bits. To change collets, first remove the bit. Continue to loosen and

unscrew the collet nut until you can remove it from the tool. Remove the collet and replace it with the other. (Each collet is double-ended, and either end is acceptable to use.) By hand, re-tighten the collet nut around the collet in a clockwise direction. You are now ready to insert a new bit as instructed in Installing Bits.

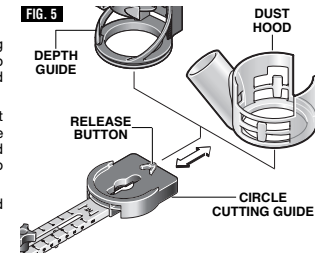


### ATTACHING CIRCLE CUTTING GUIDE (Model 1639K only)

Your tool is equipped with a circle cutting guide that can easily be attached directly to the depth guide, or the optional dust hood accessory.

To attach, position depth guide, or dust hood as shown, push down on release button and slide depth guide or dust hood onto circle cutting guide until it snaps into place.

To remove, simply press release button and slide off in direction of arrow (Fig. 5).



### ATTACHING TEMPLAT GUIDE (Not included, available as accessory)

Using a template lets you duplicate designs or letters uniformly time after time. This technique requires the use of an accessory templet guide.

To attach, simply push onto the bottom of the depth guide, or the dust cover.

To remove, pull on tab and remove (Fig. 1).

### ATTACHING DUST HOOD (Not included, available as accessory)

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

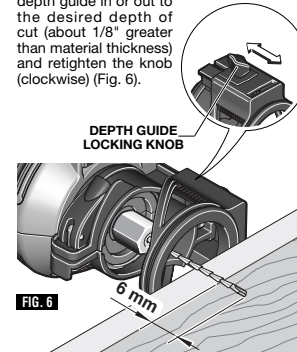
To Attach, position dust hood as shown, push onto depth guide until it lock into place.

To remove, squeeze tabs on dust hood and pull off depth guide (Fig. 1).

## Operating Instructions

### DEPTH GUIDE ADJUSTMENT

Use the depth guide to adjust the depth of cut. Simply loosen (counter clockwise) the knob (approximately 1 turn) and slide the depth guide in or out to the desired depth of cut (about 1/8" greater than material thickness) and retighten the knob (clockwise) (Fig. 6).



### DUST HOOD

**(Not included, available as accessory)** The dust hood is sized to accept 35mm vacuum hoses. The dust hood accessory includes the VAC002 adapter that will connect the dust cover to 1-1/4" and 1-1/2" vacuum hoses. An adapter to connect the hood to 2-1/2" hoses is also available separately.

### TEMPLAT GUIDE

**(Not included, available as accessory)** Templet guides are used for cutting repeated patterns, special designs, inlays, and other applications.

A templet pattern may be made of plywood, hardboard, metal or even plastic, and the design can be cut with your rotary cutter, jigsaw, or other suitable cutting tool. Remember that the pattern will have to be made to compensate for the distance between the bit and the templet guide (the "offset"), as the final workpiece will differ in size from the templet pattern by that amount, due to the bit position.

**CIRCLE CUTTING GUIDE**  
(Model 1639K only)

Your tool is equipped with a circle cutting guide that allows you to cut circles from 1 inch up to 19 inches in diameter. Unscrew pivot knob and turn pivot foot over so center point is facing down (Fig. 7).

For holes 1" to 12", assemble with center point towards the tool.

For holes 8" to 19", assemble with center point towards the round knob.

Reattach the pivot foot knob and pivot foot.

Loosen pivot knob and slide to desired diameter of hole to be cut. Line up knob with diameter size of circle you wish to cut.

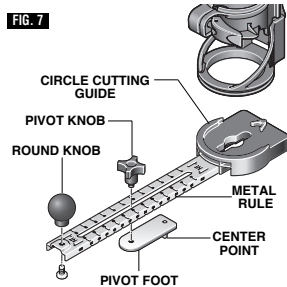
For English (IN), use the scale on top of the metal rule. For metric (CM) use the sides of the metal rule.

Start cutting in a clockwise direction using consistent moderate pressure. If you need to

reposition your hands, turn tool off first before changing hand positions.

Continue cutting your circle until you have cut the complete shape, and turn off tool.

FIG. 7



**3 POSITION ON/OFF BUMP-OFF SLIDE SWITCH**

Never leave tool unattended in either the "1" or "2" ON positions.

Your tool has 2 variable speeds. The speed is controlled by a three position bump-off slide switch located on the rear, side of the tool (fig. 8).

Position "0" is the OFF position

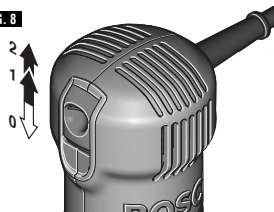
Position "1" turns the tool ON and operates at 25,000 RPM.

When the power switch is slid upward to the first - or "1" - position, the tool is "live" with a continuous running action. To turn the tool OFF push the slide switch to the "0" position.

Position "2" turns the tool ON to the 30,000 RPM level with a continuous running action.

To turn the tool OFF, push the slide switch down to the "0" position.

FIG. 8



**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.

**MAKING CUT-OUTS IN MATERIALS OTHER THAN DRYWALL**

Your tool is capable of cutting many types of building materials in addition to drywall. There are several different bits available for use on these materials. Most materials can be cut with the "wood" bit, however the "carbide" burr bits must be used for hard, abrasive materials such as ceramic FLOOR tile (will not work on ceramic FLOOR grade tile), cement board, plaster etc.

To make cut-outs, insert and adjust the proper bit according to previous instructions. Hold the tool firmly and turn it on. Place the depth guide at about a 45° angle against the work surface figure 9 and tilt the tool to an upright position with the bit entering the scrap portion of the area being cut (Fig. 10).

FIG. 9

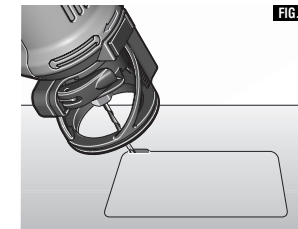
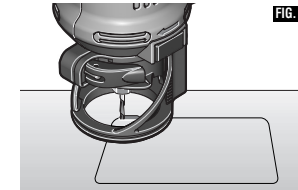


FIG. 10



Move the bit to the line you wish to follow and cut in a clockwise position. Cutting at a slow even rate will make following a line easier and will put less stress on the 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 bit. Turn the tool off and remove it from the cut out hole.

**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:** Before fastening the drywall sheet, make a mark close to the center of the opening in the box on the side of the drywall facing you. You may then begin to screw or nail the sheet to the wall, but do not install fasteners closer than about 15" to the box, or the sheet will likely bulge and crack before you cut the opening.

**Step 3:** Holding the tool firmly switch the tool to the "ON" position as described earlier.

**Step 4:** Holding the tool firmly with both hands, push the bit through the drywall at the mark you made in step 2. Guide the bit to the right until you feel it make contact with the inside edge of the box. Then retract the bit slightly, (do not pull entirely out) to allow it to penetrate through the drywall and contact the outside edge of the box by continuing to move the tool slightly to the right as you cut.

**Step 5:** Keeping the bit in contact with the outside of the box, move the tool counter-clockwise to create the opening. When rounding a corner, keep applying light pressure towards the center of the box while moving the bit steadily and smoothly around the whole box until the entire cut has been completed. Slide the switch to the "OFF" position, and pull the bit free of the drywall. You may then remove the piece you have cut, and you will have a smooth opening. The rest of the screws or nails may now be put in place on the drywall sheet, and the task is completed.

**CAUTION** The motor may stall if improperly used or overloaded. Reduce the pressure or feed rate to prevent possible damage to the tool. Do not attempt to start the tool when the bit is engaged in the workpiece. Always be sure the collet nut is tightened securely before use.

## 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.

### 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.

## Accessories

**⚠ 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 <sup>2</sup>			
	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	—	—	—	—	—	—

(\* = standard equipment)

(\*\* = optional accessories)

\* Circle cutting guide (Model 1639K only)

\*\* Templet guide

\*\* Dust cover

\*\* Hose adapter