

**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**

**1617**  
**1617EVS**  
**1617EVSPK**  
**1618EVS**



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**Version française  
Voir page 25**

**Versión en español  
Ver la página 48**

## General Power Tool Safety Warnings



### **WARNING**

**Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

### **SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE**

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### **Work area safety**

**Keep work area clean and well lit.** Cluttered or 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 children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

#### **Electrical safety**

**Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.

**Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

**Do not 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 for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

**When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

**If operating a power tool in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply.** Use of an GFCI reduces 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 a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

**Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

**Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and / or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

**Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

**Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

**Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.

**If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

#### **Power tool use and care**

**Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

**Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

**Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.

**Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

**Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

**Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

**Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

### **Service**

**Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

## **Safety Rules for Routers**

**Hold power tool by insulated gripping surfaces, because the cutter 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.

**Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by your hand or against the body leaves it unstable and may lead to loss of control.

**Do not drill, fasten or break into existing walls or other blind areas where electrical wiring may exist.** If this situation 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.

**The direction of feeding the bit into the material is very important and it relates to the direction of bit rotation. When viewing the tool from the top, the bit rotates clockwise. Feed direction of 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.**

**The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their RATED SPEED can break and fly apart.

## Additional Safety Warnings

GFCI and personal protection devices like electrician's rubber gloves and footwear will further enhance your personal safety.

**Do not use AC only rated tools with a DC power supply.** While the tool may appear to work, the electrical components of the AC rated tool are likely to fail and create a hazard to the operator.

**Keep handles dry, clean and free from oil and grease.** Slippery hands cannot safely control the power tool.

**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 leaves it unstable and may lead to loss of control.

**Develop a periodic maintenance schedule for your tool. When cleaning a tool be careful not to disassemble any portion of the tool since internal wires may be misplaced or pinched or safety guard return springs may be improperly mounted.** Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia, etc. may damage plastic parts.

Risk of injury to user. The power cord must only be serviced by a Bosch Factory Service Center or Authorized Bosch Service Station.

**⚠ 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.

## Safety Rules for Router Table

**Read and understand the tool manual and these instructions for the use of this table with your router.** Failure to follow all instructions listed below may result in serious personal injury.

**Unplug tool before setting up in table, making adjustments or changing bits.** Accidental start-up of the tool can cause injury.

**Fully assemble and tighten all the fasteners required for this table and mounting the router.** Also remember to occasionally check the stand and make sure it is still tight. A loose stand is unstable and may shift in use and cause serious injury.

**Before operating make sure the entire unit is placed on a solid, flat, level surface.** Serious injury could occur if tool is unstable and tips.

**Never stand on the table or use as ladder or scaffolding.** Serious injury could occur if the table is tipped or the cutting tool is accidentally contacted. Do not store materials on or near the table such that it is necessary to stand on the table or its stand to reach them.

**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 workpiece, possibly causing the bit to break.

**Match the appropriate bit and its speed to your application. Do not use bits that have a cutting diameter that exceeds the capacity of the tool.** Overloading the tool can lead to personal injury or tool failure.

**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 workpiece.

**Router bits are intended for wood, wood products and plastic only. Be sure the workpiece does not contain nails, etc. before routing.** Cutting a nail or the like will cause the carbides to be dislodged, fly toward the operator side, and possibly strike you or bystanders.

**Feed the workpiece against the rotation of the bit. The bit rotates counter-clockwise**

**as viewed from the top of table.** Feeding the work in the wrong direction will cause the workpiece to "climb" up on the bit and may lead to loss of control during operation.

**Never place hands near the spinning bit. Use push sticks, vertical and horizontally mounted feather boards (spring sticks) and other jigs to hold down the workpiece and keep your hands away from the spinning bit.** Router cuts are blind cuts but the bit still protrudes through the table and you must be aware of the position of your hands relative to the spinning bit.

**We do not recommend cutting material that is warped, wobbly or otherwise unstable. If this situation is unavoidable always cut the material with the concave side against the table.** Cutting the material with the concave side up or away from table may cause the warped or wobbly material to roll; causing you to lose control, kickback and serious personal injury may result.

**Use the adjustable fence in straight cutting applications.** When routing along an entire edge of the work, the fence, fence faces, and adjustable outfeed fence support shims will help maintain stability.

**When the table is used without the fence, piloted bits (or "bearing bits") must be used.** Piloted bits are used when routing internal and external contours on a workpiece. The bearing of the piloted bit assists in maintaining control of the workpiece. Whenever possible, the starter pin should also be used.













**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 touch the bit during or immediately after the use.** Contact with a spinning bit will cause injury and after use the bit is too hot to be touched by bare hands.

**Use only Bosch replacement parts.** Any others may create a hazard.

## 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
n	Rated speed	Maximum attainable speed
.../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
	Li-ion RBRC seal	Designates Li-ion battery recycling program
	Ni-Cad RBRC seal	Designates Ni-Cad battery recycling program
	Read manual symbol	Alerts user to read manual
	Wear eye protection symbol	Alerts user to wear eye protection

## Symbols (continued)

**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.



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



This symbol designates that this component is recognized by Underwriters Laboratories.



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



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



This symbol designates that this tool is listed by the Canadian Standards Association, to United States and Canadian Standards.



This symbol designates that this tool is listed by the Intertek Testing Services, to United States and Canadian Standards.



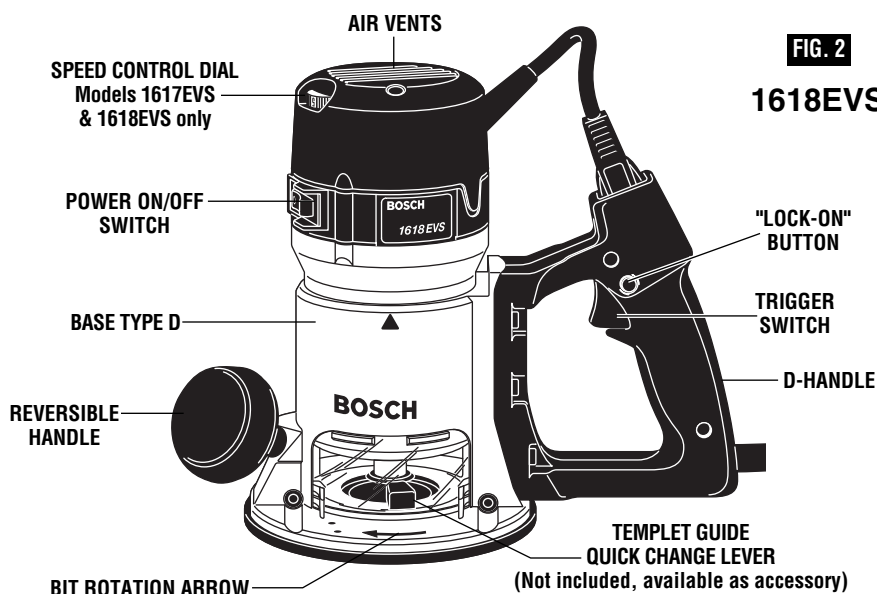
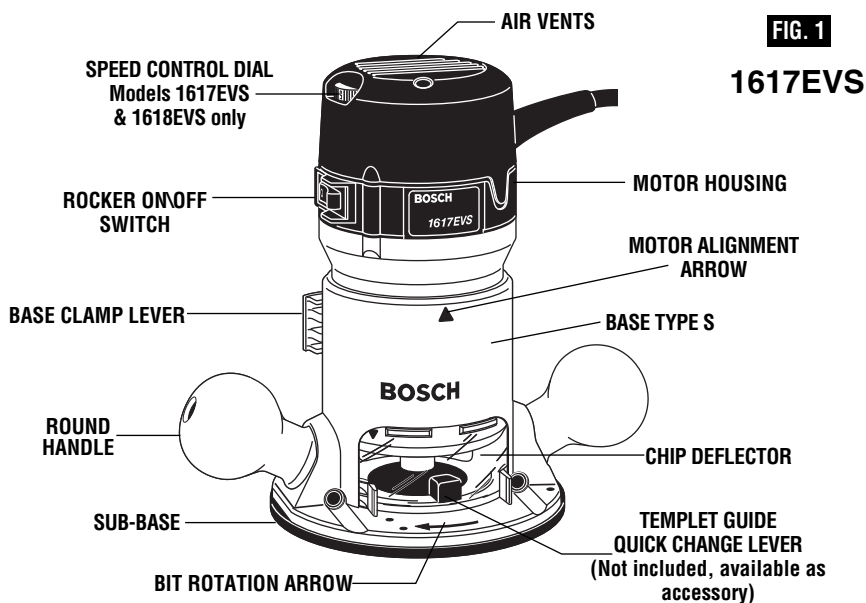
This symbol designates that this tool complies to NOM Mexican Standards.

## 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.

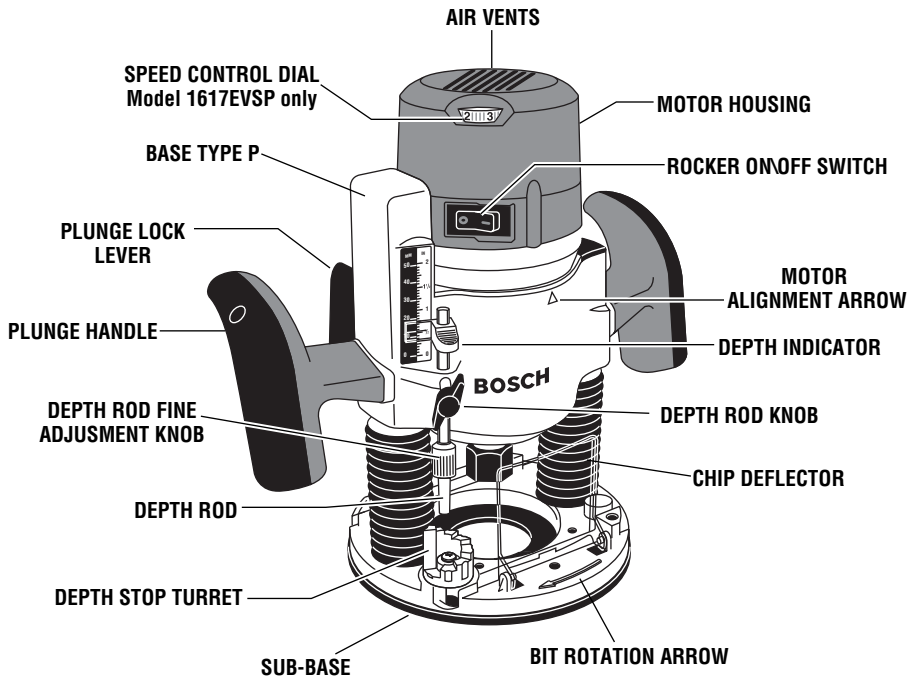
### Routers





**FIG. 3**

## 1617EVSPK



Collet capacities 1/4", 3/8", 1/2", 8mm

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

RA1161 fixed-base shop router base marked type "S" is designed for use with these router motors:  
1617 router motor (16171)  
1617EVS router motor (16176)  
1618EVS router motor (16186)

RA1162 D-handle router base marked type "D" is designed only for use with these router motors:  
1618EVS router motor (16186)

RA1166 plunge router base marked type "P" is designed for use with these router motors:  
1617 router motor (16171)  
1617EVS router motor (16176)  
1618EVS router motor (16186)

## Assembly

A wide assortment of router bits with different profiles is available separately. Use 1/2" shank whenever possible, and only use good quality bits.

**⚠ WARNING** To prevent personal injury, always remove the plug from power source before removing or installing bits or accessories.

### INSTALLING A ROUTER BIT

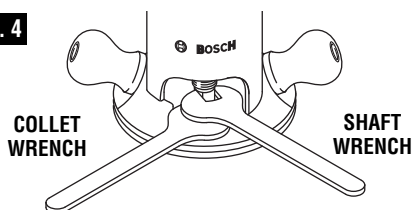
Place router upside down or lay router on its side with the base resting on the bench. Another option is to remove the motor from the base before installing the bit.

1. Remove the chip shield (or flip up if plunge base is attached).
2. Hold the armature shaft in place with the shaft wrench (Fig. 4)
3. Next, use the collet wrench to loosen the collet chuck assembly in counter-clockwise direction (viewed from under the router).
4. Once you have verified that the bit's shank is of the proper diameter for the collet to be used, insert the shank of the router bit into the collet chuck assembly as far as it will go, then back the shank out until the cutters are approximately 1/8" to 1/4" away from the collet nut face.
5. With the router bit inserted and the shaft wrench holding the armature shaft, use the collet wrench to firmly tighten the collet chuck assembly in a clockwise direction (viewed from under the router). To ensure proper gripping of the router bit and minimize run-out, the shank of the router bit must be inserted at least 5/8".

### COLLET CHUCK CARE

With the router bit removed, continue to turn the collet chuck counter-clockwise until it is free of the shaft. To assure a firm grip, occasionally blow out the collet chuck with compressed air, and clean the taper in the armature assembly shaft with a tissue or fine brush. The collet chuck is made up of two component parts as illustrated (Fig. 5); check to see that the collet is properly seated in the collet chuck nut and lightly thread the collet

FIG. 4



To tighten or loosen collet nut, hold both wrenches in one hand and squeeze the wrenches together.

**⚠ WARNING** When the templet guide has been removed from base, do not use router bits greater than 2" in diameter as they will not fit through the sub-base.

**⚠ WARNING** Cutter diameter must be at least 1/4" smaller than opening for the bit and cutter.

**⚠ CAUTION** To prevent damage to tool, do not tighten collet without a bit.

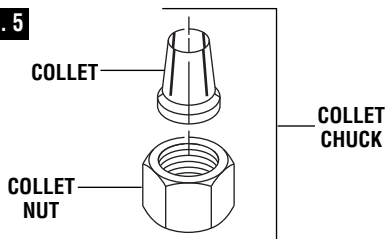
**NOTE:** The bit shank and chuck should be clean and free of dust, wood, residue and grease before assembling.

### REMOVING THE ROUTER BIT

1. Use the shaft and collet chuck wrenches as described earlier, and turn the collet chuck assembly in a counter-clockwise direction.
2. Once the collet chuck assembly is loosened continue to turn the collet chuck assembly until it pulls the collet free from its taper, and the router bit can be removed.

**NOTE:** The collet chuck is self-extracting; it is NOT necessary to strike the collet chuck to free the router bit.

FIG. 5



## REMOVING MOTOR FROM BASE (Fig. 6)

### To remove motor from non-plunge bases:

1. Hold router in horizontal position, open base clamp lever, depress coarse adjustment lever, and pull motor upwards until it stops.
2. Turn motor counter-clockwise, and gently pull it free of base.

### To remove motor from plunge base: (Fig. 7)

1. Hold router in horizontal position, open base clamp lever, and pull motor upwards until it stops.
2. Turn motor counter-clockwise, and gently pull it free of base.

## INSTALLING MOTOR IN BASE

The motor can be installed with the switch positioned on the right or left of the base from the operator's side (and the cord facing the opposite side of the router). Install the motor so that the switch is in the location you find to be the most easily accessible from the handles. The switch should be easier to turn "OFF" than "ON" in case of an emergency.

### To install motor in non-plunge base:

1. Release the base clamp lever.
2. Line up the arrow on the base with arrow on the motor. (Fig. 8)
  - To position switch on the right side of the base, line up the base's arrow with motor housing's arrow that is below the cord.
  - To position switch on the left, line up the base's arrow with motor housing's arrow that is below the switch.
3. While pressing the coarse adjustment lever, slide motor into base until resistance is felt. (The base's guide pin is now engaged into slot on motor.)
4. Continue to press coarse adjustment lever, and turn the motor clockwise until it stops.
5. Push the motor into the base until it reaches the approximate desired depth.
6. Release the coarse adjustment lever and slide the motor forward or back as needed until the coarse adjustment system's "catch" springs into the coarse adjustment detent notch.
7. Set final height position as described below in "Operating Instructions".

### To install motor in plunge base:

1. Release the base clamp lever.
2. Line up the arrow on the base with arrow on the motor. (Fig. 8)
  - To position switch on the right side of the base, line up the base's arrow with arrow

on the motor housing that is below the cord.

- To position switch on the left, line up the base's arrow with arrow on the motor housing that is below the switch.

3. Slide motor into base until resistance is felt. (The base's guide pin is now engaged into slot on motor.)
4. Turn the motor clockwise until it stops.
5. Push the motor into the base as far as it will go.
6. Fasten the base clamp lever.

FIG. 6

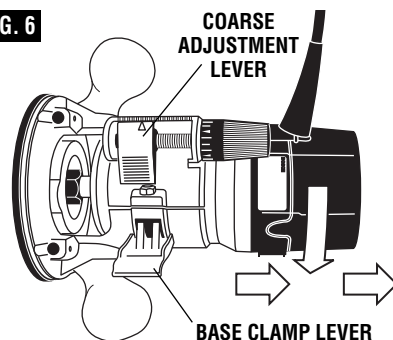


FIG. 7

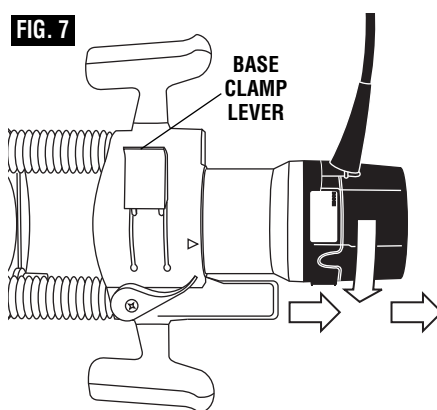
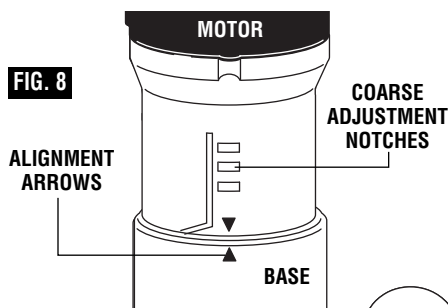


FIG. 8



### CHIP DEFLECTOR

**⚠ WARNING** Always wear eye protection. The chip deflector is not intended as a safety guard.

The chip deflectors help keep dust and chips out of your face, it will not stop objects larger than dust thrown from the bit.

To remove chip shield from bases, press inward on tabs until it releases from base and remove. To attach, place deflector into position as shown in (Fig. 9). Then flex sides of deflector while pushing until it snaps into place. The plunge base's chip shield can also be flipped out.

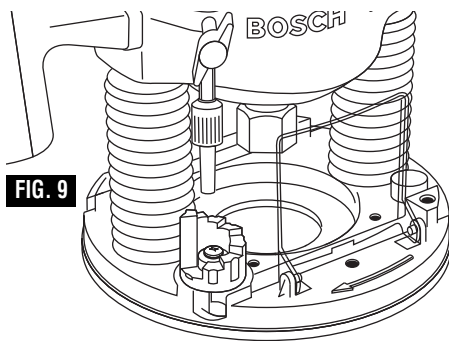


FIG. 9

## Operating Instructions

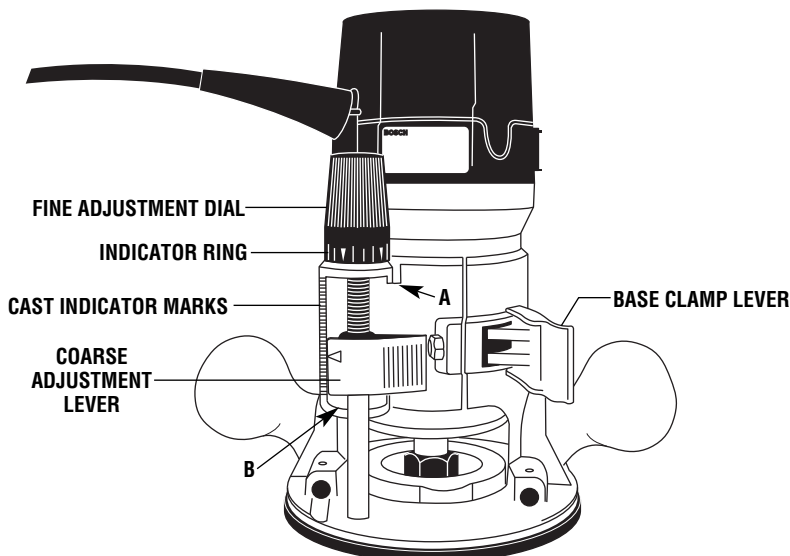


FIG. 10

Bosch routers are designed for speed, accuracy and convenience in performing cabinet work, routing, fluting, beading, cove-cutting, dove tails, etc. They will enable you to accomplish inlay work, decorative edges and many types of special carving.

### DEPTH ADJUSTMENT WITH FIXED BASE

Router's RA1161 fixed base are equipped with a true micrometer type fine adjustment mechanism, which can be used in any position and provides precise adjustment of the router bit position for unmatched accuracy. When the tool is lowered to the approximate position desired, this device may be adjusted to precisely set the final bit position.

Your router also features three horizontal notches on both sides of the motor housing for coarse adjustments. The notches are spaced 1/2" apart which allows you to quickly lower or raise the tool depth in three 1/2" increments. (Approximately 12.7 mm), by simply depressing the coarse adjustment release lever.

### TO ADJUST DEPTH

**NOTE:** All depth adjustments must be made with the base clamp lever released.

1. Hold the tool in a horizontal position with the base clamp lever facing you.
2. Open the base clamp lever to release the motor.

### 3. COARSE ADJUSTMENT:

To make a large depth adjustment, depress coarse adjustment release lever and raise or lower to desired depth. There are three notches in the motor housing which are spaced 1/2" to facilitate this adjustment.

### 4. FINE DEPTH ADJUSTMENT:

To use the fine adjustment feature, turn the fine adjustment knob clockwise to lower the router bit or counter-clockwise to raise it.

**NOTE:** Be sure coarse adjustment lever is engaged in one of the coarse adjustment notches before making a fine adjustment.

To allow precise settings, the indicator ring is graduated in English and Metric increments. (Note: one full turn of fine adjustment knob = 1/16" or approximately 1.5 mm. The fine adjustment mechanism has a total adjustment range of 7/8" (23 mm). Each cast indicator mark next to coarse adjustment lever is equal to 1/8"

To prevent damage to tool, avoid wedging the coarse adjustment lever against the upper A or lower B portion of the housing as shown in figure 10.

5. After making depth adjustments, re-clamp the motor.

The indicator ring may be reset to zero without moving the fine adjustment knob, to allow the user to begin the adjustment from any reference point desired.

When the router is installed in a router table, it can be adjusted with a 1/8" hex wrench, not included with all models. (See page 21).

The RA1002 Fine Adjustment Control Extension, an optional accessory for the non-

plunge bases, allows fine adjustment from beyond the top of the motor housing. To install, simply press the RA1002 into the end of the base's own fine adjustment knob. (Fig. 11)

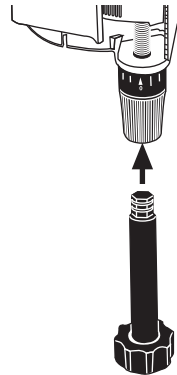
### TO CLAMP MOTOR

When final coarse and fine adjustments have been made, fasten the base clamp lever to secure adjustments. (If additional clamping force is desired: using a 10 mm wrench, rotate clamp nut clockwise SLIGHTLY (1/8 turn or less), then test clamp. Do not over-tighten.)

### DEEP CUTS

For deeper cuts, make several progressively deeper cuts by starting at one depth and then make several subsequent passes, increasing the cutting depth with each pass.

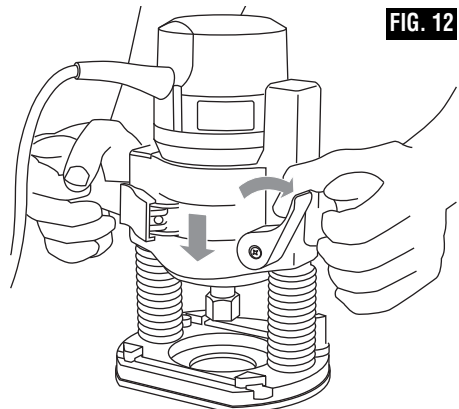
To be certain that your depth settings are as desired, you may want to make test cuts in scrap material before beginning work.



**FIG. 11**

### DEPTH ADJUSTMENT WITH PLUNGE BASE PLUNGING ACTION

The plunge feature simplifies depth adjustments and will allow the cutting bit to easily and accurately enter the workpiece. To lower, push plunge lock lever to the left, apply downward pressure until you reach desired depth, and release pressure on lever to lock (Fig. 12). The plunge lock lever is spring loaded and returns automatically to the locked position. To raise the router, push plunge lock lever to the left, release pressure on router and the router will automatically retract the bit from the workpiece. It is advisable to retract the bit whenever it is not engaged in workpiece.



**FIG. 12**

### DEPTH ROD AND TURRET

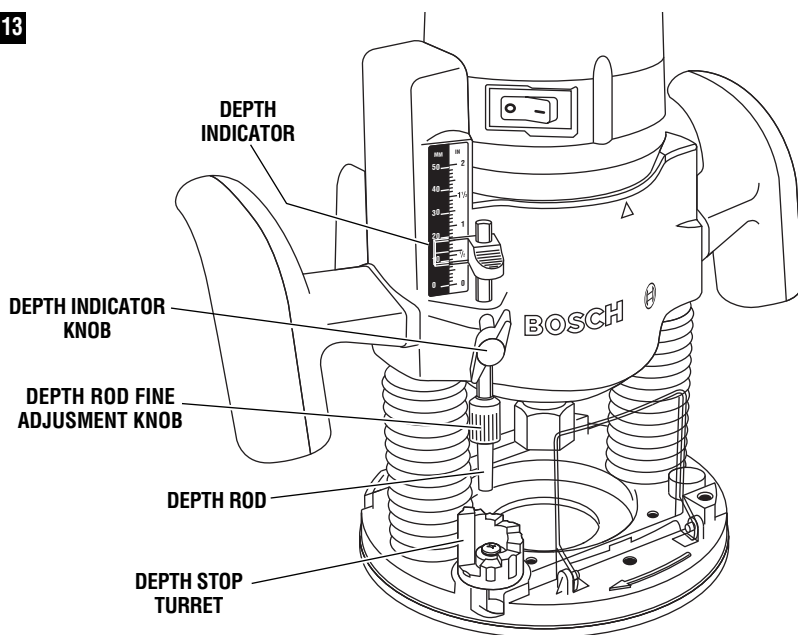
The depth rod and the depth stop turret are used to control cutting depth as follows;

1. With the bit installed, gently lower the motor until the tip of the router bit just contacts the level surface the router is sitting on. This is the "zero" position, from which further depth adjustments can be accurately made.
2. To set a desired depth of cut, rotate depth stop turret until the lowest step is aligned with the depth rod. Loosen depth indicator knob and lower the depth rod until it contacts the lowest step of the turret. Slide

the depth indicator until the red line indicates zero on the depth scale, indicating the point at which the bit just contacts the work (Fig. 13).

3. To set a desired cutting depth, slide the depth rod up until the red depth indicator line attains the desired cutting depth, and secure the rod in position by firmly tightening the depth indicator knob.
4. The desired depth of cut may now be achieved by plunging the router until the depth rod contacts the selected stop on the turret.

**FIG. 13**



### DEEP CUTS

For deeper cuts, make several progressively deeper cuts by starting with the highest step on the depth turret, and after each cut, rotate the depth turret to progressively lower steps as desired, until the final depth (lowest step or flat) is reached. Steps progress by  $1/8"$  increments.

To be certain that your depth settings are as desired, you may want to make test cuts in scrap material before beginning work.

### FINE ADJUSTMENT

The RA1166 plunge base is equipped with a fine adjustment system that allows you to micro adjust the plunge depth of the router bit for superior routing accuracy.

Each complete revolution of the fine adjustment stop adjusts the plunging depth by  $1/32"$ , and each of the four indicator marks on the knob represents  $1/128"$ . One of the four tick marks is larger than the other to indicate a complete revolution. A reference indicator line is built in to the depth rod.

To use the fine adjustment knob, once the depth rod and turret have been set, check the final depth setting and fine-adjust as follows:

To micro-increase the plunge depth, raise the fine adjustment stop by turning it counter-clockwise by the desired amount.

To micro-reduce the plunge depth, lower the fine adjustment stop by turning it clockwise by the desired amount.

### Notes:

- When micro-adjusting the plunge depth, it is more convenient to move the fine adjustment stop up than down. Before setting the depth rod and turret, make sure the fine adjustment stop has been turned several revolutions down from its top position so that it can be adjusted upward.
- The fine adjustment stop cannot be used to reduce the plunge depth when the depth rod is already touching the depth stop turret.

The router must be raised before such an adjustment can be made.

- Also available is an alternative turret that has an adjustable step which uses an M4 screw for the adjustable step. The adjustable step makes it possible to make multiple-pass applications without having to make a fine depth adjustment even when the total cutting depth is not a multiple of 1/8".

### ROCKER "ON/OFF" SWITCH

Your tool can be turned "ON" or "OFF" by the rocker switch located on the motor housing. One side of the switch is marked "I" for "ON", and the other side of switch is marked "O" for "OFF". Also the edge of switch displays red when switch is in the "ON" position.

**TO TURN THE TOOL "ON":** Push the side of the switch marked "I".

**TO TURN THE TOOL "OFF":** Push the side of the switch marked "O".

Always hold the router off the work when turning the switch on or off. Contact the work with the router after the router has reached full speed, and remove it from the work before turning the switch off. Operating in this manner will prolong switch and motor life and will greatly increase the quality of your work (Fig. 1).

### ROCKER POWER "ON-OFF" WITH TRIGGER SWITCH AND "LOCK-ON" BUTTON

(Model 1618EVS only)

The power is switched "ON" by the rocker switch located on the top of the motor housing as described above. Now your tool can be turned "ON" or "OFF" by squeezing or releasing the trigger. Your tool is also equipped with "Lock-ON" button located just above the trigger that allows continuous operation without holding the trigger (Fig. 2).

**TO LOCK SWITCH ON:** Squeeze trigger, depress button and release trigger.

**TO UNLOCK THE SWITCH:** Squeeze trigger and release it without depressing the "Lock-ON" button.

**⚠ WARNING** If the "Lock-ON" button is continuously being depressed, the trigger cannot be released.

On model 1617 hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist.

### SOFT START FEATURE

(Models 1617EVS & 1618EVS only)

Electronic feedback control minimizes torque twist customary in larger routers by limiting the speed at which motor starts.

### ELECTRONIC VARIABLE SPEED CONTROL

(Models 1617EVS & 1618EVS 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. 1). Speed may be changed while tool is on. The reference numbers on the dial facilitate re-setting control to desired speed.

The speed chart indicates the relationship between settings and application, exact settings are determined by operator experience and preference. The bit manufacturer may also have a speed recommendation.

DIAL SETTING	RPM	APPLICATION
1	8,000	Nonferrous metals, larger diameter bits and cutters
2	13,500	
3	16,500	
4	20,000	Softwoods, plastics, counter tops, smaller diameter bits and cutters
5	21,500	
6	25,000	

### CONSTANT RESPONSE™ CIRCUITRY

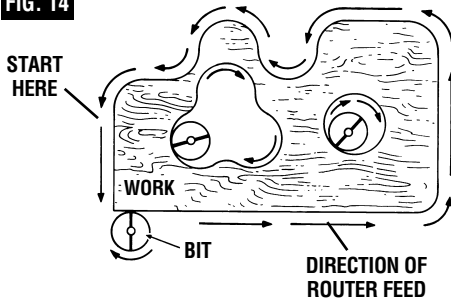
(Models 1617EVS & 1618EVS only)

The router's Constant Response™ Circuitry monitors and adjusts power to maintain the desired RPM for consistent performance and control.

## FEEDING THE ROUTER

As seen from the top of the router, the bit turns clockwise and the cutting edges face accordingly. Therefore, the most efficient cut is made by feeding the router so that the bit turns into the work, not away. Figure 14 shows proper feed for various cuts. How fast you feed depends on the hardness of the material and the size of the cut. For some materials, it is best to make several cuts of increasing depth.

**FIG. 14**



If the router is hard to control, heats up, runs very slowly or leaves an imperfect cut, consider these causes:

1. Wrong direction of feed — hard to control.
2. Feeding too fast — overloads motor.
3. Dull bit — overloads motor.
4. Cut is too large for one pass — overloads motor.
5. Feeding too slow — leaves friction burns on work.

Feed smoothly and steadily (do not force). You will soon learn how the router sounds and feels when it is working best.

## RATE OF FEED

When routing or doing related work in wood and plastics, the best finishes will result if the depth of cut and feed rate are regulated to keep the motor operating at high speed. Feed the router at a moderate rate. Soft materials require a faster feed rate than hard materials.

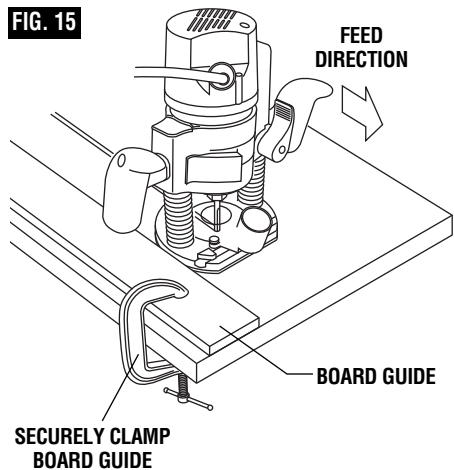
The router may stall if improperly used or overloaded. Reduce the feed rate to prevent possible damage to the tool. Always be sure the collet chuck is tightened securely before use. Always use router bits with the shortest cutting length necessary to produce the desired cut. This will minimize router bit run-out and chatter.

## GUIDING THE ROUTER

The router can be guided through the work in any of several ways. The method you use depends, of course, on the demands of the particular job and on convenience.

For routing operations such as grooving or dadoing, it is often necessary to guide the tool in a line parallel to a straight edge. One method of obtaining a straight cut is to securely clamp a board or other straightedge to the work surface, and guide the edge of the router sub-base along this path (Fig. 15).

**FIG. 15**





## ROUTER DUST COLLECTION

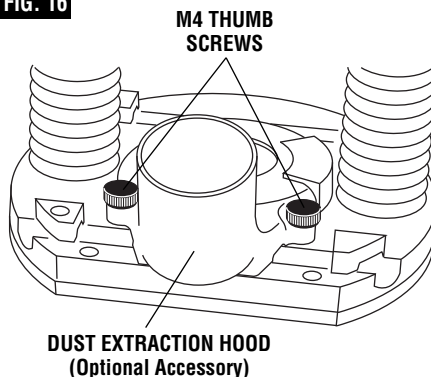
There are three optional dust extraction hood accessories. Each dust extraction hood is sized to accept 35mm vacuum hoses. Each accessory pack includes the VAC002 adapter that will connect the hood to 1-1/4" and 1-1/2" vacuum hoses. An adapter to connect the hood to 2-1/2" hoses is also available separately.

### ROUTER DUST COLLECTION FOR PLUNGE BASE

This dust extraction hood is designed for use with the plunge base (RA1166) when routing is done in the middle of the workpiece, such as when creating slots or routing patterns for inlays. If you have a shop vacuum system, you can attach the dust extraction hood for improved visibility, accuracy and utility, particularly in freehand routing.

To attach, position as shown and secure adapter to base with the thumbscrews provided (Fig. 16).

**FIG. 16**



The dust extraction hood can also be installed with the hose outlet facing the front of the tool. If the templet guide adapter is installed, it will need to be reversed or removed to allow the release lever to fit under the dust hood.

### DUST EXTRACTION HOOD FOR BACKSIDE OF FIXED BASE

**⚠ WARNING** Read and understand these instructions and tool manual for use of these accessories.

Do not reach in area of the bit while the router is ON or plugged in.

**⚠ CAUTION** To avoid entangling hoses, do not use this dust extraction hood at the same time as any other dust extraction hood.

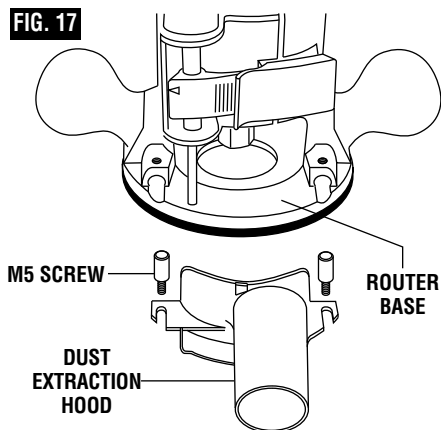
This dust extraction hood is designed for use with Bosch routers 1617, 1617EVS, 1618EVS and their fixed bases when the routing is done in the middle of the workpiece, such as when creating slots or routing out patterns for inlays.

To attach the hood to the router base, slide the hood into the backside of the router base around the router's depth adjustment rod with the hood's rounded corners facing up (Fig. 17 & 18). Securely tighten the two knurled thumbscrews.

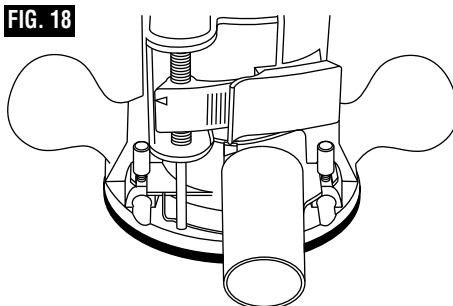
### USING THE HOOD FOR BACKSIDE OF FIXED BASE

For maximum dust collection effectiveness, make sure the router's chip shield is in place.

**FIG. 17**



**FIG. 18**



## EDGEFORMING DUST EXTRACTION HOOD

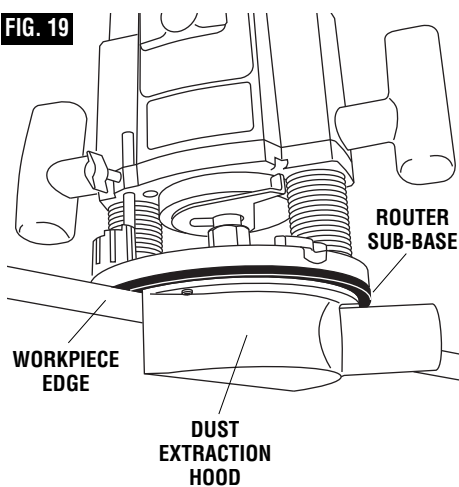
**⚠ WARNING** Do not reach in area of the bit while the router is ON or plugged in. To avoid entangling hoses, do not use this dust extraction hood at the same time as any other dust extraction hood.

This dust extraction hood (optional accessory) is used for dust collection when edge-forming (Fig. 19).

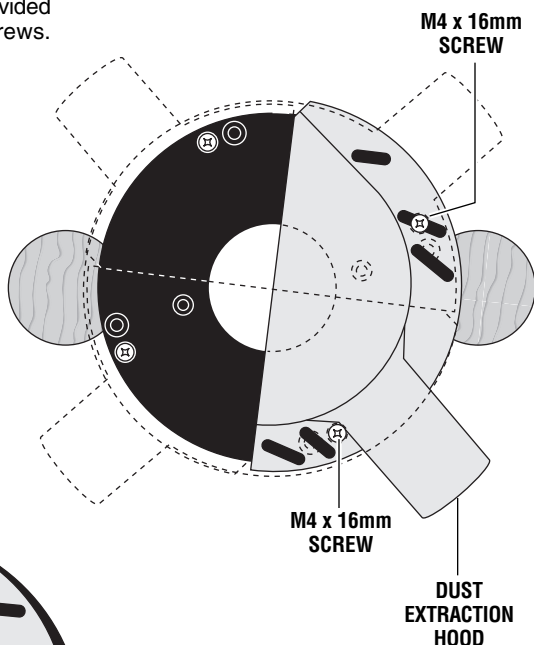
### ATTACHING DUST EXTRACTION HOOD

You can attach the edge-forming hood in several places according to your needs or preferences. This hood is attached using two of the screw holes on the router base that are used to attach the router's sub-base. Choose the desired location for the hood. Loosen and take out the two screws from the router base and attach the dust extraction hood — over the router's sub-base — using the screws provided with the hood. Securely tighten the screws. (Figures 20 & 21).

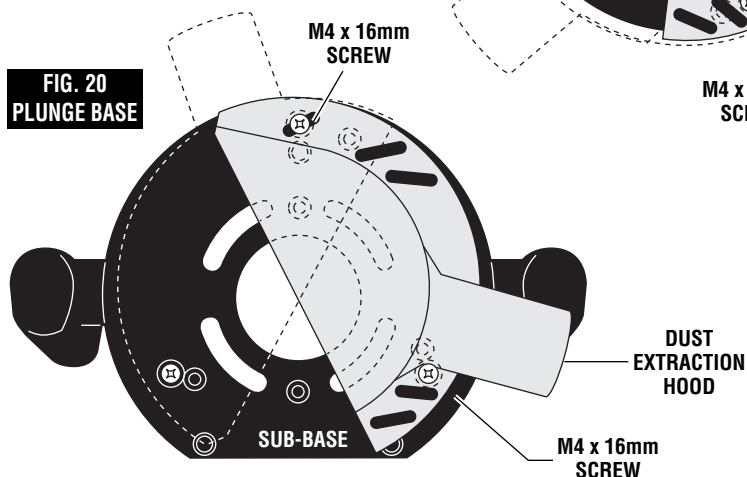
**FIG. 19**



**FIG. 21  
OTHER BASES**



**FIG. 20  
PLUNGE BASE**



## DELUXE ROUTER GUIDE

(Not included, available as accessory)

The Bosch deluxe router guide is an optional accessory that will guide the router parallel to a straight edge or allow you to create circles and arcs.

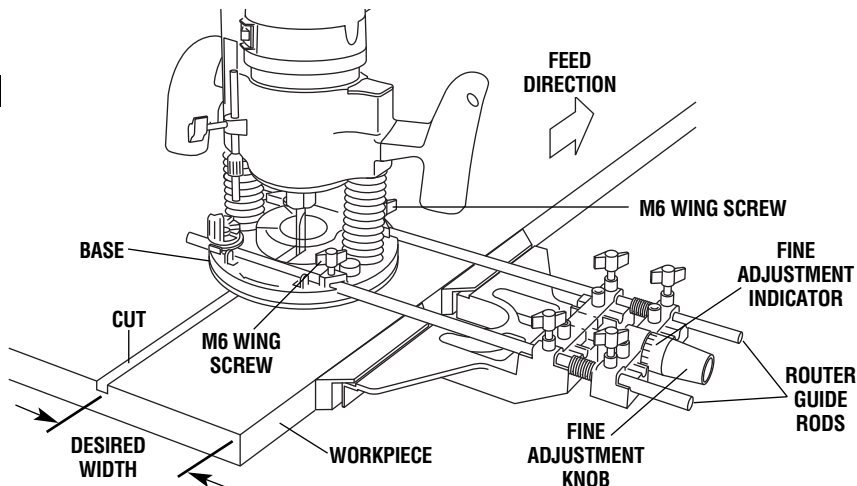
The deluxe router guide is supplied with two rods and screws to fasten the guide (Fig. 22). In addition, it features a fine adjustment knob and indicator for accurately positioning the edge guide relative to the bit. With the guide installed and adjusted, the router should be fed

normally, keeping the guide in contact with the edge of the workpiece at all times. The deluxe router guide may also be positioned directly under the router base for operations where a cut is needed close to or at the edge of the work.

The deluxe router guide includes a dust extraction hood and the VAC002 vacuum hose adapter.

For complete instructions on installation and operation, please refer to the instructions which are included with this accessory.

FIG. 22



## TEMPLET GUIDES

This router can also be used with the optional Bosch-exclusive quick-change templet guide system, which firmly grips the guides with a spring-loaded ring. Unlike conventional threaded templet guides, there is no threaded ring that can come loose while routing.

Templet guides are used with a number of special accessories, such as hinge templets, which are listed in your BOSCH catalog. In addition, special templets are easily prepared 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 a router, jigsaw, or other suitable cutting tool. Remember that the pattern will have to be made to compensate for the distance between the router 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 (Fig. 24).

FIG. 23

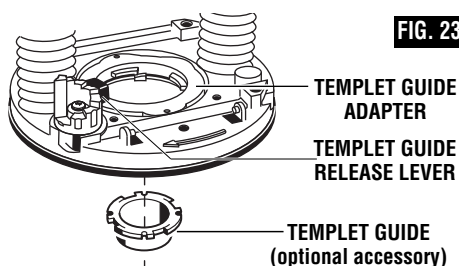
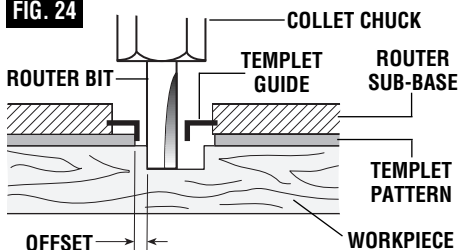
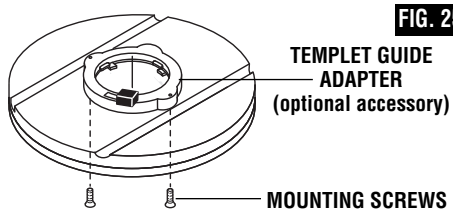


FIG. 24



## INSTALLING TEMPLSET GUIDE ADAPTER (Not included, available as accessory)

Place templet guide adapter over the holes in the center of the sub-base, and align the two threaded holes in the bottom of adapter with the countersunk holes in sub-base. Fasten adapter with the screws provided. Note that the adapter is reversible, so the release lever may be positioned as desired. (Fig. 25)



## CENTERING THE SUB-BASE OR TEMPLSET GUIDES

Your router features the Bosch "Precision Centering Design". Its sub-base is precisely centered at the factory. This positions the bit at the center of the sub-base and optional templet guides.

Precision centering allows you to use the edge of the subbase or templet guides to closely follow jigs such as straight guides, templets, and dovetail fixtures without worrying about bit walk-off from the intended cut line for any reason, including the orientation of the router's handles relative to the jig.

To quickly re-center the sub-base, attach the sub-base using the set of flathead screws (included) and the countersunk screw holes in the sub-base. (Flathead screws have the

tapered heads.) The flathead screws and countersunk holes will pull the sub-base into a position that is very close to centered.

To most precisely re-center the sub-base or templet guides, attach the sub-base using the optional Bosch RA1151 Centering Device. Follow steps 1-8 (Fig. 26 & 27).

1. If a templet guide is to be centered, install the templet guide adapter and template guide (optional attachments) as described elsewhere in this manual.
2. Position the sub-base so that its pan-head screw holes are over the matching set of threaded holes in the base.
3. Insert the pan-head screws through the sub-base and tighten them until they are snug, but still allow the sub-base to move.

FIG. 26  
PLUNGE BASE

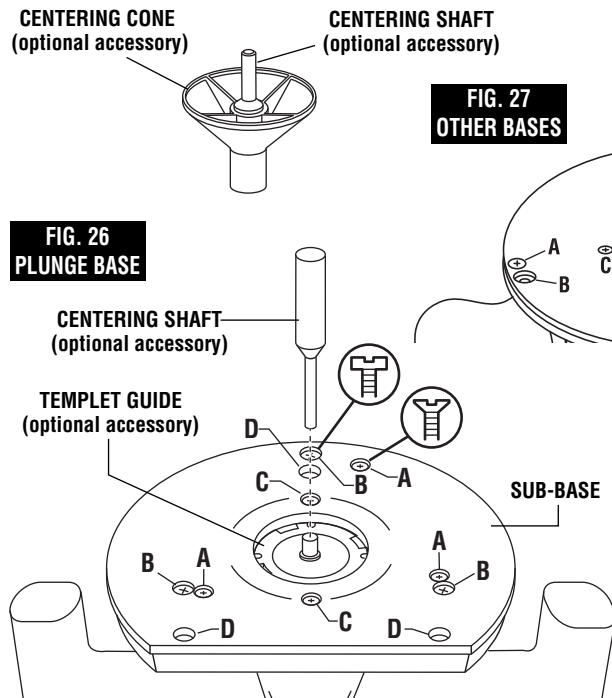
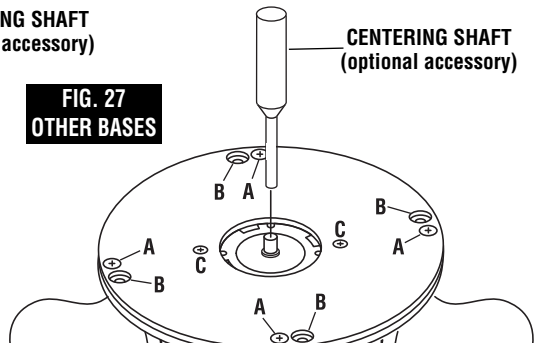


FIG. 27  
OTHER BASES



#### 4. Prepare the Centering Device:

- Use narrow end of steel shaft when inserting into 1/4" collet, wider end of cone when inserting into 1/2" collet.
- When centering subbase or templet guide that has opening of more than 1/2", slide the wide plastic sleeve over the steel shaft.

#### 5. Slide centering sleeve through the sub-base or templet guide and into collet. Tighten

collet nut with fingers to put slight grip on centering cone.

#### 6. Lightly press centering sleeve into sub-base or templet guide to center.

#### 7. Tighten the pan-head screws. Remove centering sleeve.

#### 8. The precision centering of the sub-base or templet guide is complete.

**CENTERING CONE** – Used when centering the subbase itself or wide templet guides.

### MAXIMUM BIT/CUTTER SIZE FOR TEMPLER GUIDES

When using a templet guide, use only router bit with cutters that are 1/16" less than the internal diameter of the templet guide, such as in the table below.

Bosch Templet Guide	Bushing Depth	External Diameter	Internal Diameter	Max Bit/Cutter Diameter
	A	B	B	
RA1101	3/16"	5/16"	1/4"	3/16"
RA1103	9/64"	5/16"	17/64"	13/64"
RA1105	9/64"	7/16"	3/8"	5/16"
RA1107	5/16"	7/16"	3/8"	5/16"
RA1109	7/16"	1/2"	13/32"	11/32"
RA1111	3/16"	5/8"	17/32"	15/32"
RA1113	1/2"	5/8"	17/32"	15/32"
RA1115	3/16"	3/4"	21/32"	19/32"
RA1117	31/64"	13/16"	5/8"	9/16"
RA1119	31/64"	1"	25/32"	21/32"
RA1121	7/16"	1-3/8"	1-19/64"	1-15/64"

### USE WITH THREADED TEMPLER GUIDES

Also available as an optional accessory is an additional adapter, the RA1100, that allows use of conventional threaded templet guides with the Bosch quick-release system.

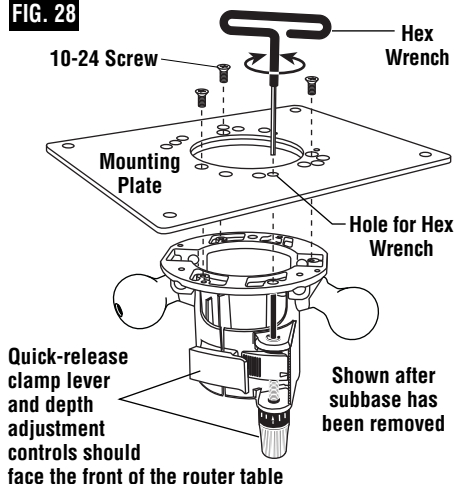
### USE IN ROUTER TABLE

Your router can also be used in a router table. The RA1161 fixed base is designed to allow easy depth adjustment in a table. The RA1162 "D" D-Handle base will not fit in most router tables.

**CAUTION** The RA1166 Plunge Base is not recommended for use in a router table. Damage to plunge router base may occur.

To eliminate the hassle of installing your router's own base on the router table and later having to convert it back for non-table use, Bosch offers the optional RA1165 Undertable Router Base (Fig. 28). The RA1165 base is designed to be permanently attached your router table, leaving your other router bases ready for non-table use. The motor can be quickly moved from base to base — without any tools!

**FIG. 28**



The undertable base accessory includes the screws needed to fasten the base to a router table mounting plate, as well as a T-hex wrench for above-table depth adjustment.

#### **ATTACHING BASE TO MOUNTING PLATE**

Attach the RA1161 to the router table's mounting plate using either or both sets of enclosed mounting screws.

The base has two sets of threaded holes for mounting the base:

- Three 10-24 holes in industry-standard 3-hole pattern.
- Four M4 holes in Bosch 4-hole pattern.

Mounting screws required for the RA1161: (not included with all models).

- Three 10-24 screws.
- Four M4 screws.

The length will depend on the thickness of your router table or router table mounting plate.

If your router table mounting plate does not have countersunk holes in either of those patterns, you will need to determine the hole locations, drill and countersink them, also locate and drill a hole for the over-table adjustment wrench.

#### **CONNECT THE ROUTER AND THE ROUTER TABLE SWITCH**

To prepare for use of the switch,

1. Make sure the router switch and the router table switch are both turned off.
2. Plug the router table switch cord to wall outlet.
3. Plug the router into the "pigtail" socket on the router table switch.

4. Lock router switch on: squeeze trigger, depress lock-on button, and release trigger.
5. Use the router table switch to start and stop the router.

#### **DEPTH ADJUSTMENT** (See page 12-13)

#### **FEEDING THE WORKPIECE ON A ROUTER TABLE**

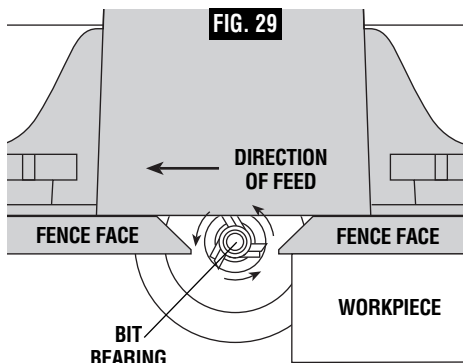
Always use your router table's fence or starter pin and the appropriate guard and follow the router table's instruction manual. ALWAYS feed the workpiece from right to left across the front of the bit. On Bosch router tables, the correct feed direction is also shown on fence housing and on the featherboards, when they have been properly installed. (Fig. 29)

Whenever possible, when using the fence, use a push stick to push the workpiece, especially when working with narrow pieces.

For complete instructions on operation of a router in a router table, please refer to the instructions that come with the router table.

#### **TOP VIEW**

**NOTE:** For clarity, guard and featherboard removed from drawing.



## 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.

## 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 <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	—	—	—	—	—	—

## Accessories

1/4" Collet Chuck \*

1/2" Collet Chuck \*

16 mm Shaft Wrench \*

24 mm Collet Nut Wrench \*

T-Hex Wrench (Std with 1617EVS and  
1617EVSPK only)

3/8" Collet Chuck \*\*

8 mm Collet Chuck \*\*

Deluxe Router Guide \*\*

Centering Device \*\*

Carry Case (Std with 1617K, 1617EVSK,  
1617EVSPK only)

Dust Extraction Hoods \*\*

Edge-Forming Dust Extraction Hood \*\*

Fine Adjustment Control Extension \*\*

Undertable Base with Fine Adjustment  
Control Extension \*\*

Router Tables \*\*

Quick-Release Templet Guides \*\*

Templet Guide Adapter \*\*

Adapter for Standard-Style Templet Guides \*\*

Adjustable Depth Stop Turret \*\*

(\* = standard equipment)

(\*\* = optional accessories)