KING CANADA

VARIABLE SPEED ROTARY TOOL

135 PC.
ACCESSORY KIT

PERFORMANCE PLUS

MODEL: 8353N

INSTRUCTION MANUAL

IMPORTANT INFORMATION

2-YEAR LIMITED WARRANTY FOR THIS ROTARY TOOL	**KING CANADA TOOLS** OFFERS A 2-YEAR LIMITED WARANTY FOR NON-COMMERCIAL USE.

PROOF OF PURCHASE
Please keep your dated proof of purchase for warranty and servicing purposes.

LIMITED TOOL WARRANTY
King Canada makes every effort to ensure that this product meets high quality and durability standards. King Canada warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, alterations and lack of maintenance. King Canada shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, return the product at your expense together with your dated proof of purchase to an authorized King Canada service center. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

PARTS DIAGRAM & PARTS LISTS
Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

1. KNOW YOUR TOOL
Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

3. USE RIGHT TOOL.
Don't force the tool or the attachment to do a job for which it was not designed.

4. WEAR PROPER APPAREL.
Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

5. MAINTAIN TOOL WITH CARE.
Keep tool clean for best and safest performance. Follow instructions for operation and changing accessories.

6. DISCONNECT TOOLS.
Before servicing, when changing accessories or attachments.

7. AVOID ACCIDENTAL STARTING.
Make sure the switch is in the ''OFF'' position before plugging in.

8. USE RECOMMENDED ACCESSORIES.
Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

9. CHECK FOR DAMAGED PARTS.
Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts which are damaged should be properly repaired or replaced.

SPECIFIC SAFETY INSTRUCTIONS FOR ROTARY TOOLS

Additional Rules for Safe Operation

1. Accessories must be rated for at least the speed recommended on the tool nameplate. Wheels and other accessories running over rated speed can fly apart and cause injury.

2. Do not operate the flexible shaft with sharp bend. Over-bending the shaft can generate excessive heat on the jacket or hand piece. The recommended minimum is 6" radius.

3. 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.

4. Allow brushes to run at operating speed for at least one minute before using wheel. During this time no one is to stand in front or in line with the brush. Loose bristles or wires will be discharged during the run-in time. Wire and bristle brushes must never be operated at speeds greater than 15,000 min. Direct the discharge of the spinning wire brush away from you.

5. Do not use a grinding wheel that may be damaged. Inspect all grinding wheels and tips before use. Fragments from a wheel that bursts during operation will fly away at great velocity possibly striking you or bystanders.

6. Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use. Clamping a small workpiece allows you to use both hands to control the tool. Allow for sufficient space, at least 6", between your hand and the spinning bit. When using the steel saws, cutoff wheels, high speed cutters or tugsten carbide cutters, always have the work securely clamped. Never attempt to hold work with one hand while using any of these accessories.

7. 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.

8. If the workpiece or bit becomes jammed or bogged down, turn the tool "OFF" by the switch. Wait for moving parts to stop and unplug the tool, then work to free the jammed material.

9. Do not grind or sand near flammable materials. Sparks from the wheel could ignite these materials.

GETTING TO KNOW YOUR ROTARY TOOL

WARNING!: If any parts are missing, do not operate your rotary tool until missing parts are replaced. Failure to do so could result in serious personal injury.	**WARNING!:** Do not use this product as a component of others products. Also, do not use attachments or accessories not recommended for use with this product. Any such use could result in possible serious injury.

Technical Specifications

Voltage 120V
Amperage.....1.1A
Cycle/Phase .....60Hz, 1 phase
Power input 135W
No load speed/min. 10,000-33,000
Collet nut capacity .....1/8”
Collet sizes.....1/32”, 5/64”, 3/32” & 1/8”
Weight .....1.5 lbs.

Getting to know your Rotary Tool

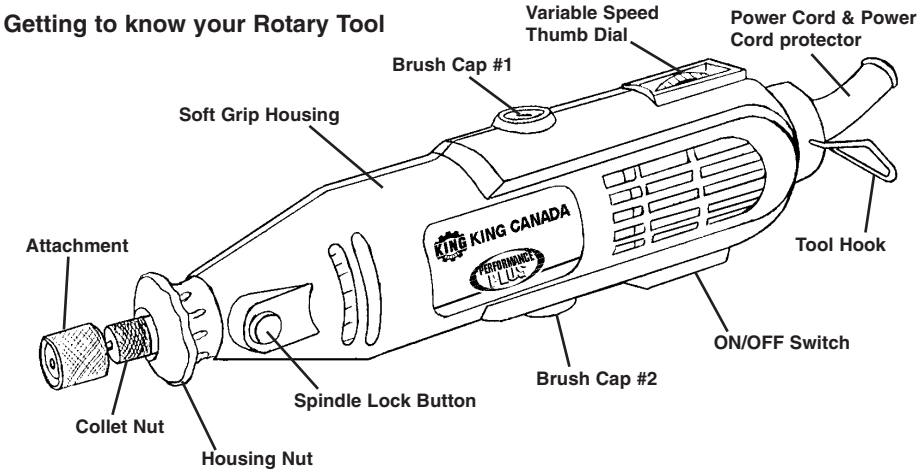


Figure 1

ASSEMBLY & OPERATION

WARNING! Always unplug Rotary Tool before changing accessories, changing collets or servicing.

Attachment, collet and collet nut assembly

CAUTION! Always use the collet which matches the shank size of the accessory you plan to use. Never force a larger diameter shank into a smaller sized collet.

Collet Nut- To loosen the collet nut (A) Fig.2, press shaft lock button (B) and rotate the tool shaft by hand until the lock engages the shaft preventing further rotation.
WARNING: Do not engage shaft lock button while the tool is running.

With the shaft lock engaged, use the collet nut wrench (C) to loosen it if necessary. The collet nut must be loosely threaded on when inserting an accessory. Change accessories by inserting the new one into the collet (D) as far as possible to minimize runout and unbalance. With the shaft lock engaged, finger tighten the collet nut until the accessory shank is gripped by the collet. Avoid excessive tigtening of the collet nut when there is not accessory inserted.

To install a different collet, remove the collet nut and the collet already in place. Insert the unslotted end of the collet in the hole at the end of the tools’ shaft. Replace collet nut on the shaft and tighten.

Attaching the Flex Shaft

Unscrew the housing nut (A) Fig.3 and remove it. The collet nut (B) and the 1/8” collet (C) must be kept in place. Mount the Flex Shaft by placing the inner shaft (D) into the tools’ chuck, secure it in place by tightening the collet nut. Then using the Flex Shaft housing nut (E), fix the Flex Shaft to the rotary tool by turning it clockwise.

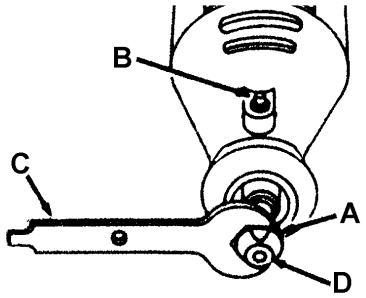


Figure 2

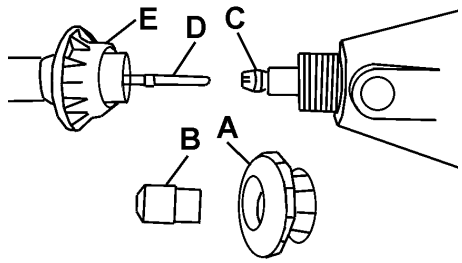


Figure 3

ASSEMBLY & OPERATION

Rotary Tool Stand Assembly

Your rotary tool comes with a practical work stand and clamping system which can be mounted to any workbench or other surfaces having a maximum thickness of 2-3/8". The clamping system can also be permanently fixed to a workbench using screws driven through the supplied clamp fixing holes.

Fix the clamping system (A) Fig.4 to your workbench, then screw in the stand shaft (B) into the clamping system and secure. The height of the stand is adjustable, loosen the top tube of the stand by turning it counterclockwise. Draw the tube out to its maximum or desired height and secure it by turning the tube clockwise. The height of the suspension bracket (C) is also adjustable by loosening the black knob (D). After adjusting the suspension bracket to the desired height and direction, retighten the black knob.

Operation

Before operating, make sure you have read all previous safety precautions before operating your rotary tool.

The real secret to your rotary tool is its speed. A typical electric drill is a low-speed, high torque tool. The rotary tool is the opposite, it is a high-speed, low torque tool. So please do not apply pressure on the tool, simply hold it and guide it, the speed will do the rest. **Warning! Too high a load at a low speed can burn out the motor.**

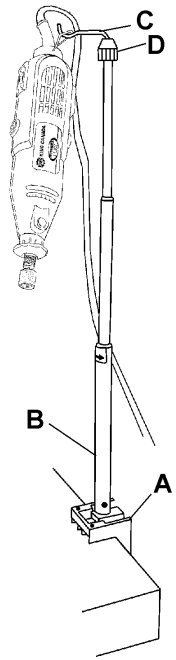


Figure 4

Hold the rotary tool in your hand and plug the power cord into the wall outlet. Switch on the rotary tool by pressing the ON/OFF switch (A) Fig.5. Then a speed setting must be selected using the variable speed thumb dial (B). The accessory and job to do will determine the speed setting to use.

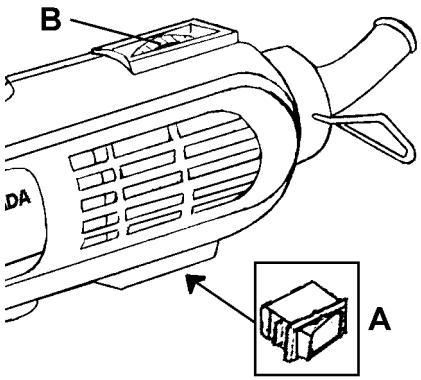


Figure 5

OPERATING SPEEDS & ACCESSORIES

Operating Speeds

Set the variable speed thumb dial to a speed to fit the job. To achieve the best results when working with different materials, the speed of the rotary tool should be adjusted.

To select the right speed for each job, we suggest you use a practice piece of material. Vary speed to find the best speed for the accessory you are using and the job to be done.

Needs for slower speeds- certain materials (some plastics and precious metals for example) require a relatively slow speed because at high speed the friction of the accessory generates heat and may cause damage to the material. Slow speeds usually are best for polishing operations using the felt polishing accessories. Important note: All brushing applications require lower speeds to avoid wire discharge from the holder.

Higher speeds are better for carving, cutting, routing, shaping, cutting dadoes or rabbets in wood. Hardwoods, metals and glass require high speed operation, and drilling should also be done at high speeds.

Accessory / Material / Operating Speed

Your Rotary Tool is designed to accept standard rotary tool accessories, if you purchase accessories other than from King Canada, always make sure that the maximum rpm of the accessory is suitable for the maximum speed of your tool.

Grinding Stones

When using a grinding stone for the first time, use the dressing stone to balance it and even to give it a special shape if desired. Grinding stones cover virtually every possible kind of grinding application from deburring, sharpening, smoothing...etc.

Grinding Stones

Material	Speed Setting
Stone	1
Steel	5
Aluminum, Brass	2
Plastic	1

Felt/Polishing Wheels

The felt/polishing wheels need to be screwed onto the screw mandrel. These felt/polishing wheels must only be operated at lower speeds and are largely used to bring metal surfaces to a smooth finish.

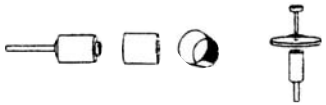
Felt/Polishing Wheels

Material	Speed Setting
Steel	5
Aluminum, Brass	3
Plastic	5

OPERATING SPEEDS & ACCESSORIES

Sanding Sleeves and Discs

These sleeves and discs can be used for any small sanding need you may have. The drum sander (drum and sanding sleeve) can shape wood and sand inside curves or other difficult places.



Sanding Sleeves and Discs

Material	Speed Setting
Wood	6
Steel	1
Aluminum, Brass	3
Plastic	1

Stainless steel Brush and Bristle Brushes

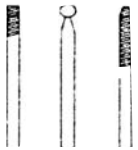
Important note: All brushing applications require lower speeds to avoid wire discharge from the holder. Stainless steel brushes perform well on aluminum, stainless steel and other metals, witout leaving “after-rust”. Bristle brushes are good for general purpose cleaning.

Brushes

Material	Speed Setting
Stone	2
Aluminum, Brass	2

High Speed Cutter, Engraving Cutters and Drill Bits

High speed cutters are used in carving, cutting and slotting wood, plastics and soft metals. Engraving cutters are used for intricate work on ceramics, wood carvings and jewelry and drill bits are used to punch holes in just about any type of wood and wood composites. Different sized drill bits will require the appropriate collet to be used.

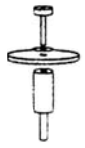


Cutters and Drill Bits

Material	Speed Setting
Stone	Max
Steel	3
Aluminum, Brass	6
Plastic	1

Abrasive discs

These abrasive discs are used for slicing, cutting off and similar operations.



Abrasive Discs

Material	Speed Setting
Steel	5
Aluminum, Brass	3
Plastic	5

ROTARY TOOL MAINTENANCE

Servicing

Warning! Preventive maintenance performed by unauthorized personnel may result in misplacing of internal wires and components which could cause **serious injury and will void warranty.**

Cleaning

To avoid accidents always disconnect the tool from the power source before cleaning or performing any maintenance. The tool is most effectively cleaned using compressed air. Ventilation openings and switch levers must be kept clean and free of foreign matter.

Certain cleaning agents and solvents damage plastic parts, such as gasoline, carbon tetrachloride, chlorinated cleaning solvents, ammonia and household detergents which contain amonia.

Carbon Brushes (Fig.6)

The brushes (A) Fig.6 and commutator in your tool have been engineered for many hours of dependable service. To maintain peak efficiency of the motor, we recommend that the brushed be inspected after 50-60 hours of use.

If the carbon brushes are less than 1/8” long, replacement brushes are needed, only use identical replacement brushes available through your nearest King Canada service centre.

Lubrication

Your rotary tool requires no additional lubrication.

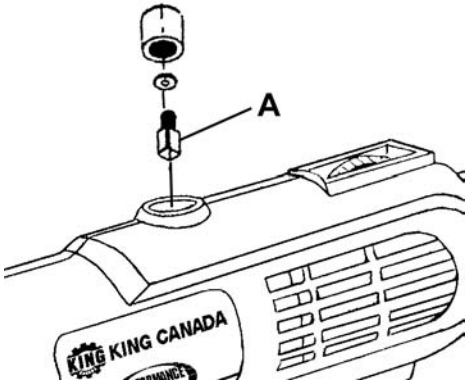


Figure 6