

CRL C.R. LAURENCE CO., INC.

Variable Speed Rotary Tool Kit

Instruction Manual

CAT. NO. LD111, LD111EU and LD111AU



SAVE THIS MANUAL

You will need this manual for safety instructions, operating procedures, and warranty. Put it and the original sales invoice in a safe, dry place for future reference.



Care for the environment!

Tool must not be discarded with household waste!
This product contains electrical or electronic components that should be recycled. Leave the product for recycling at the designated station e.g. the local authority's recycling station.

Subject to printing errors and design changes over which we have no control. In the event of problems please contact our Customer Service Department.

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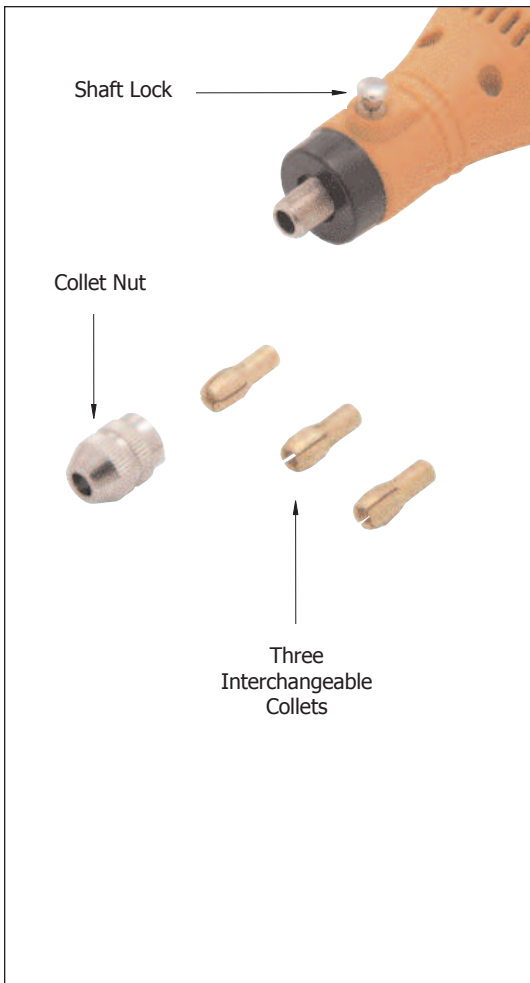
TECHNICAL SPECIFICATIONS

Available Primary Voltages	120V 60Hz, 220/240V 50Hz
Secondary Maximum Output	12V DC, 1500ma
No Load Speed	8,000-18,000 rpm
Collet Chuck Capacity	1.0, 2.35, 3.0, 3.2 mm diameters
Cable Type for Tool	Curly 6 ft. (2.0 m) extended
Cable Type for Transformer	Standard 6 ft. (2.0 m)

IMPORTANT! - Safety Instructions for All Tools



WARNING: When using electric power tools, important safety precautions must always be adhered to in order to reduce the risk of fire, electric shock, and personal injury.



SAFETY INSTRUCTIONS

PLEASE READ THE FOLLOWING CAREFULLY:

- 1. KEEP WORK AREA CLEAN.** Untidy benches and work areas can cause injuries.
- 2. CONSIDER WORK AREA ENVIRONMENT.** Do not use power tools in damp or wet locations. Do not expose power tools to rain. Keep work areas well lit.
- 3. GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces, e.g. radiators, pipes, refrigerator enclosures.
- 4. KEEP CHILDREN AWAY.** All visitors must be kept away from the work area. Do not let visitors come into contact with the tool or extension cord.
- 5. STORE IDLE TOOLS.** When not in use, tools must be stored in a dry place, out of the reach of children.
- 6. DO NOT FORCE THE TOOL.** It will perform better and safer at the rate for which it was intended.
- 7. USE THE RIGHT TOOL.** Do not force a small tool to do the job of a heavy duty power tool. Do not use the tool for the purpose it is not intended for, e.g. trying to drill through concrete with the 12 Volt Mini Tool.
- 8. DRESS PROPERLY.** Do not wear loose clothing or jewelry, as these can be caught in moving parts. Gloves and non-skid footwear are recommended when working outdoors. Wear protective head cover to contain long hair.
- 9. USE SAFETY GLASSES.** Also use a dust mask to guard against dust.
- 10. DO NOT ABUSE THE CORD.** Never carry the tool by the cord or pull the cord to disconnect the tool. Keep the cord away from heat, oil, or sharp objects.
- 11. SECURE YOUR WORK.** Use clamps or a vise to hold your work in position. It is much safer than using your hand, and it frees both hands to operate the tool.
- 12. DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 13. MAINTAIN TOOLS WITH CARE.** Keep tools clean for better and safer performance. Follow instructions for lubricating and changing accessories. Keep hands dry, clean and free from oil and grease.

- 14. DISCONNECT TOOLS.** When not in use, before servicing, and when changing any accessories.
- 15. REMOVE ADJUSTING KEYS AND WRENCHES.** Make it a habit to check and see that the keys and adjusting wrenches are removed from the tool before turning it on.
- 16. AVOID UNINTENTIONAL STARTING.** Do not carry plugged-in tool with your finger on the switch. Be sure that the switch is off when plugging the tool in.
- 17. OUTDOOR EXTENSION CORDS.** When the tool is used outdoors, use only extension cords intended for outdoor use and are marked accordingly.
- 18. STAY ALERT.** Watch what your are doing. Use common sense. Do not operate the tool when you are tired.
- 19. CHECK DAMAGED PARTS.** Before using the tool, check to ensure that the tool will perform the intended function properly. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition that may affect the tool's operation.
- 20. DO NOT OPERATE.** Portable electric tools should not be used near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks may ignite fumes.

USAGE AND APPLICATIONS

Your new Variable Speed Mini Rotary Tool has been carefully designed for close-up and controlled precision work on small work pieces and in confined spaces. It is an ideal tool for hobbies, model making and repairing, electronics, and small DIY tasks. The tool, together with the accessories provided, will allow you to carry out a variety of tasks, including sanding, polishing, engraving, drilling, grinding, cutting, and cleaning.

SOURCE OF POWER

Your Mini Rotary Tool has a 12V DC motor which makes it safer to use and ensures that the tool is small and compact. The transformer can be plugged straight into a standard household outlet. If the transformer overheats, switch off your tool and unplug it from the outlet. Allow approximately three minutes for cooling before resuming work.

SAFETY INSTRUCTIONS

IMPORTANT GENERAL SAFETY TIPS!

1. The tool should be unplugged when changing accessories.
2. If you stall the tool, switch it off immediately.
3. Periodically check the tightness of your collet chuck, especially during prolonged use of the same accessory.
4. After use, always disconnect your power tool.
5. Do not attempt to repair the power tool yourself.
6. Do not leave your tool or transformer unattended while switched on.
7. The transformer must be plugged into an easily accessible main outlet close to your equipment.
8. Always unplug the transformer before disconnecting your 12V tool.
9. Do not attempt repairs on the transformer.
10. Do not drop your transformer.
11. After use, always disconnect your transformer from the main outlet.
12. Do not use or store your transformer or 12V tool in damp or wet conditions.

USEFUL HINTS AND TIPS

1. Your mini tool will become warm after prolonged use. When it does switch it off and allow it to cool down.
2. To ensure smooth running, the spindle should be oiled periodically.
3. Do not apply too much radial pressure to the accessory bits while polishing, cleaning, sanding, or grinding. By doing so you will put a strain on the spindle and adversely affect the precision of the tool.
4. Always work with a sensitive touch so as not to impede the efficiency of your mini tool.
5. When drilling metal, always mark the drilling point with a center punch first, so that your mini tool does not slip.
6. Always ensure that you have maximum contact between the accessory shaft and the collet chuck.
7. Vary the speed on the tool for the work in hand. Use low speed for polishing and cleaning, and high speed for engraving.

PLACING ACCESSORIES INTO THE TOOL

Always switch the tool off first. Hold the locking ring at the front of the tool down and undo the collet chuck (counter clockwise). Insert the collet that matches the shaft size of the accessory to be used. Place the collet nut over the collet and then insert the accessory shaft into the collet chuck ensuring maximum shaft contact. Tighten the collet nut. (DO NOT USE PLIERS).