

RIDGID 31803

RIDGID 31803 65S Stainless Steel Tubing Cutter Instruction Manual

Model: 31803 | Brand: RIDGID

1. INTRODUCTION

This instruction manual provides essential information for the safe and effective use of the RIDGID 31803 65S Stainless Steel Tubing Cutter. Please read this manual thoroughly before operating the tool to ensure proper function, maximize tool life, and prevent injury. Retain this manual for future reference.

The RIDGID 31803 65S is designed for cutting stainless steel tubing with a capacity ranging from 1/4-inch to 2-5/8-inch (6 mm to 67 mm).

2. SAFETY INFORMATION

Always observe basic safety precautions when using hand tools to reduce the risk of personal injury. Failure to follow these instructions may result in serious injury.

- **Wear Eye Protection:** Always wear ANSI-approved safety glasses or goggles when operating this tool.
- **Keep Work Area Clean:** Cluttered work areas invite accidents.
- **Use the Right Tool:** Do not force the tool or attachment to do a job for which it was not designed.
- **Inspect Tool Before Use:** Check for damaged parts. Before using the tool, any part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function.
- **Secure Workpiece:** Ensure the tubing is securely held to prevent movement during cutting.
- **Keep Hands Clear:** Keep hands and fingers away from the cutting wheel during operation.
- **Proper Grip:** Maintain a firm grip on the tool.
- **Deburr Edges:** Cut edges of tubing can be sharp. Use appropriate deburring tools after cutting.

3. PRODUCT FEATURES

The RIDGID 31803 65S Tubing Cutter incorporates several design elements for efficient and precise cutting:

- **Bearing-Equipped Rollers:** Features 12 individual bearings that replace traditional rollers, providing a smoother rotation and increased speed around the tube.
- **Stainless Steel Cutter Wheel:** A specially designed cutter wheel with bearings in its hub reduces drag, contributing to a smoother cut. The wheel is precision-machined from high-grade steel for durability and accuracy.
- **Contoured Frame:** The frame design allows for easy alignment of the tool on the tubing and facilitates cut adjustment.
- **X-CEL Knob:** A large, ergonomic X-CEL knob provides a firm grip, enabling quick and easy cutting.
- **Cutting Capacity:** Capable of cutting tubing from 1/4-inch to 2-5/8-inch (6 mm to 67 mm).



Figure 1: Overview of the RIDGID 31803 65S Stainless Steel Tubing Cutter.



Figure 2: Close-up view of the 12 individual bearings that replace traditional rollers, designed for smoother tube rotation.



Figure 3: Exploded view showing the components of the cutter wheel assembly, including the bearing in the hub for reduced drag.

4. SETUP

The RIDGID 31803 65S Tubing Cutter is ready for use out of the box. No assembly is required. Before first use, inspect the cutting wheel for any damage or debris.

1. **Inspect the Cutter:** Ensure the cutting wheel and rollers are clean and free from obstructions.
2. **Prepare Tubing:** Ensure the tubing to be cut is clean and free of burrs or deformities at the cutting point. Mark the desired cut location clearly.

5. OPERATING INSTRUCTIONS

Follow these steps for safe and effective tubing cutting:

1. **Open the Cutter:** Rotate the X-CEL knob counter-clockwise to open the cutter jaws sufficiently to fit over the tubing.
2. **Position the Tubing:** Place the tubing between the rollers and the cutting wheel. Align the cutting wheel with the marked cut line on the tubing. Ensure the tubing rests firmly on the rollers.
3. **Close the Cutter:** Rotate the X-CEL knob clockwise until the cutting wheel makes light contact with the tubing. Do not overtighten initially.

4. **Begin Cutting:** Rotate the cutter around the tubing, applying light pressure by turning the X-CEL knob clockwise approximately a quarter turn for each full rotation of the cutter.
5. **Continue Cutting:** Maintain steady, even pressure and rotation. The bearing-equipped rollers and cutter wheel are designed to reduce friction and provide a smooth cut.
6. **Complete the Cut:** Continue rotating and tightening until the tubing is completely severed.
7. **Remove and Deburr:** Open the cutter and remove the cut tubing. Use a reamer or deburring tool to smooth the inside and outside edges of the cut tubing.



Figure 4: Demonstrating the proper grip and rotation technique for cutting tubing with the RIDGID 31803.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your RIDGID 31803 65S Tubing Cutter.

- **Cleaning:** After each use, wipe down the cutter with a clean cloth to remove any metal shavings or debris.

- **Lubrication:** Periodically apply a light machine oil to the moving parts, such as the screw mechanism and roller bearings, to ensure smooth operation.
- **Cutter Wheel Replacement:** The cutting wheel is a wear item and will eventually become dull. A dull wheel can cause uneven cuts or deform the tubing. To replace the cutter wheel, use replacement cutter wheel model E-635 (RIDGID Part Number 29973). Refer to the diagram in Figure 3 for the general assembly of the cutter wheel.
- **Storage:** Store the tool in a clean, dry place away from moisture and corrosive materials.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Uneven or rough cut	Dull or damaged cutting wheel; Insufficient or uneven pressure; Tubing not properly seated.	Replace cutting wheel (E-635 / 29973); Apply consistent, light pressure; Ensure tubing is firmly on rollers.
Difficulty rotating cutter	Excessive pressure; Dirty or unlubricated screw mechanism/bearings; Damaged rollers.	Reduce pressure; Clean and lubricate screw and bearings; Inspect and replace damaged rollers if necessary.
Tubing deforms during cut	Dull cutting wheel; Too much pressure applied too quickly.	Replace cutting wheel; Apply lighter, more gradual pressure.

8. SPECIFICATIONS

Specification	Detail
Model Number	31803 (65S)
Cutting Capacity	1/4-inch to 2-5/8-inch (6 mm to 67 mm)
Material	Stainless Steel (tool body and cutter wheel designed for stainless steel)
Item Weight	1.1 pounds
Product Dimensions	1 x 1 x 1 inches (approximate, as listed)
Replacement Cutter Wheel	Model E-635 (RIDGID Part Number 29973)
Manufacturer	RIDGID (North Coast Electric listed as distributor)

9. WARRANTY

RIDGID covers its products with a lifetime warranty against defects in material or workmanship for the life of the tool. For specific details regarding warranty claims and coverage, please refer to the official RIDGID warranty policy available on their website or contact customer support.

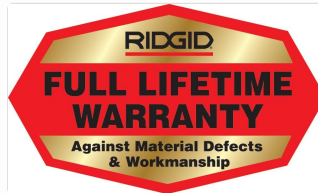


Figure 5: RIDGID Full Lifetime Warranty against material defects and workmanship.

10. SUPPORT

For further assistance, technical support, or to inquire about replacement parts, please contact RIDGID customer service. You can typically find contact information on the official RIDGID website or through authorized distributors.

RIDGID Official Website: www.ridgid.com