**BEAMNOVA BI0B03M259-0REFBA**

# BEAMNOVA Hand Crank Jewelry Rolling Mill Machine Instruction Manual

Comprehensive guide for setup, operation, and maintenance of your BEAMNOVA Rolling Mill.

## Introduction

Welcome to the instruction manual for your BEAMNOVA Hand Crank Jewelry Rolling Mill Machine. This manual provides essential information for the safe and efficient operation, setup, and maintenance of your new tool. Please read this manual thoroughly before using the machine to ensure proper function and to prevent injury or damage.
The BEAMNOVA Rolling Mill is designed for jewelers and metalworkers to process various ductile metals into desired forms, including thin sheets, wires, and pieces with specific grooves. Its robust construction and user-friendly design make it an indispensable tool for crafting and refining metal pieces.

## Safety Instructions

Your safety is paramount. Always adhere to the following safety guidelines when operating the rolling mill:

- **Read the Manual:** Familiarize yourself with all instructions and warnings before operation.
- **Personal Protective Equipment (PPE):** Always wear appropriate safety glasses or goggles to protect your eyes from metal chips or debris. Consider wearing gloves to protect hands, but ensure they will not get caught in moving parts.
- **Secure the Machine:** Ensure the rolling mill is securely bolted to a sturdy workbench or surface before use. This prevents tipping or movement during operation.
- **Clear Work Area:** Keep your workspace clean, well-lit, and free of clutter. Remove any loose items, jewelry, or clothing that could get caught in the machine's moving parts.
- **Proper Material:** Only use ductile metals such as gold, silver, copper, and aluminum. Do not attempt to roll hardened or brittle materials, as this can damage the machine or cause injury.
- **Avoid Overloading:** Do not force the machine or attempt to reduce metal thickness too rapidly. Make gradual adjustments to the rollers.
- **Keep Hands Clear:** Never place your hands near the rollers or gears while the machine is in operation. Use appropriate tools to guide metal if necessary.
- **Regular Maintenance:** Perform routine maintenance as described in this manual to ensure the machine remains in safe working condition.

- **Supervision:** Do not allow children or untrained individuals to operate the machine.

## Product Overview

### Components

The BEAMNOVA Rolling Mill consists of several key components designed for efficient metal processing:


*Figure 1: Key Components of the Rolling Mill. This diagram highlights the main parts such as the hand crank, gears, and rollers, essential for understanding the machine's operation.*

- **Rollers:** Two highly polished, hardened steel rollers that press and shape the metal.
- **Roller Distance Adjustment Gear:** Located at the top, this mechanism allows precise adjustment of the gap between the rollers.
- **Hand Crank:** The long handle used to manually turn the rollers and apply pressure.
- **Pinion and Oversized Gear:** These gears work together to provide a labor-saving mechanical advantage, making it easier to press metal.

- **Gear Cover:** A protective cover over the gears to ensure safe operation.
- **Stable Base:** The sturdy base with pre-drilled holes for secure mounting to a workbench.

## Key Features

The BEAMNOVA Rolling Mill is equipped with features designed for performance and durability:

- **3-in-1 Functionality:** Capable of producing finer metal sheets, and creating both round and square grooves of various specifications.
- **Heavy-Duty Construction:** Features an all-steel body for wear and corrosion resistance, and hardened steel rollers (approx. 60 HRC) for superior deformation resistance.
- **Wide Application:** Ideal for use in the jewelry industry, suitable for processing gold, silver, copper, aluminum, and other metals with good ductility.
- **User-Friendly Operation:** The distance between rollers is easily adjustable via top gears, and the base can be securely bolted to a workbench.
- **Labor-Saving Design:** The pinion drives an oversized gear, reducing the effort required and ensuring more uniform pressing of metal. The extra-long hand crank further enhances ease of use.

*Figure 2: BEAMNOVA Rolling Mill and its applications. This image showcases the machine alongside various jewelry pieces, illustrating its versatility in metal crafting.*

## Specifications

Below are the technical specifications for the BEAMNOVA Hand Crank Jewelry Rolling Mill Machine:

| Specification | Detail |
|---|---|
| Manufacturer | BEAMNOVA |
| Part Number | BI0B03M259-0REFBA |
| Color | Dark Green |
| Material | Metal |
| Item Package Quantity | 1 |
| Product Dimensions (L x W x H) | 32 x 25 x 23 cm (12.6 x 9.8 x 9.1 inches) |
| Item Weight | 19.37 kg (42.7 lbs) |
| Roller Length | 130 mm (5.11 inches) |
| Roller Diameter | 55 mm (2.17 inches) |
| Upper Roller Width | 85 mm (3.35 inches) |
| Middle Roller Width | 45 mm (1.77 inches) |
| Square Groove Sizes (approx. ±0.01mm) | 1mm, 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 6mm |
| Round Groove Sizes (approx. ±0.01mm) | 2mm, 3mm, 4mm, 5mm, 6mm, 8mm |

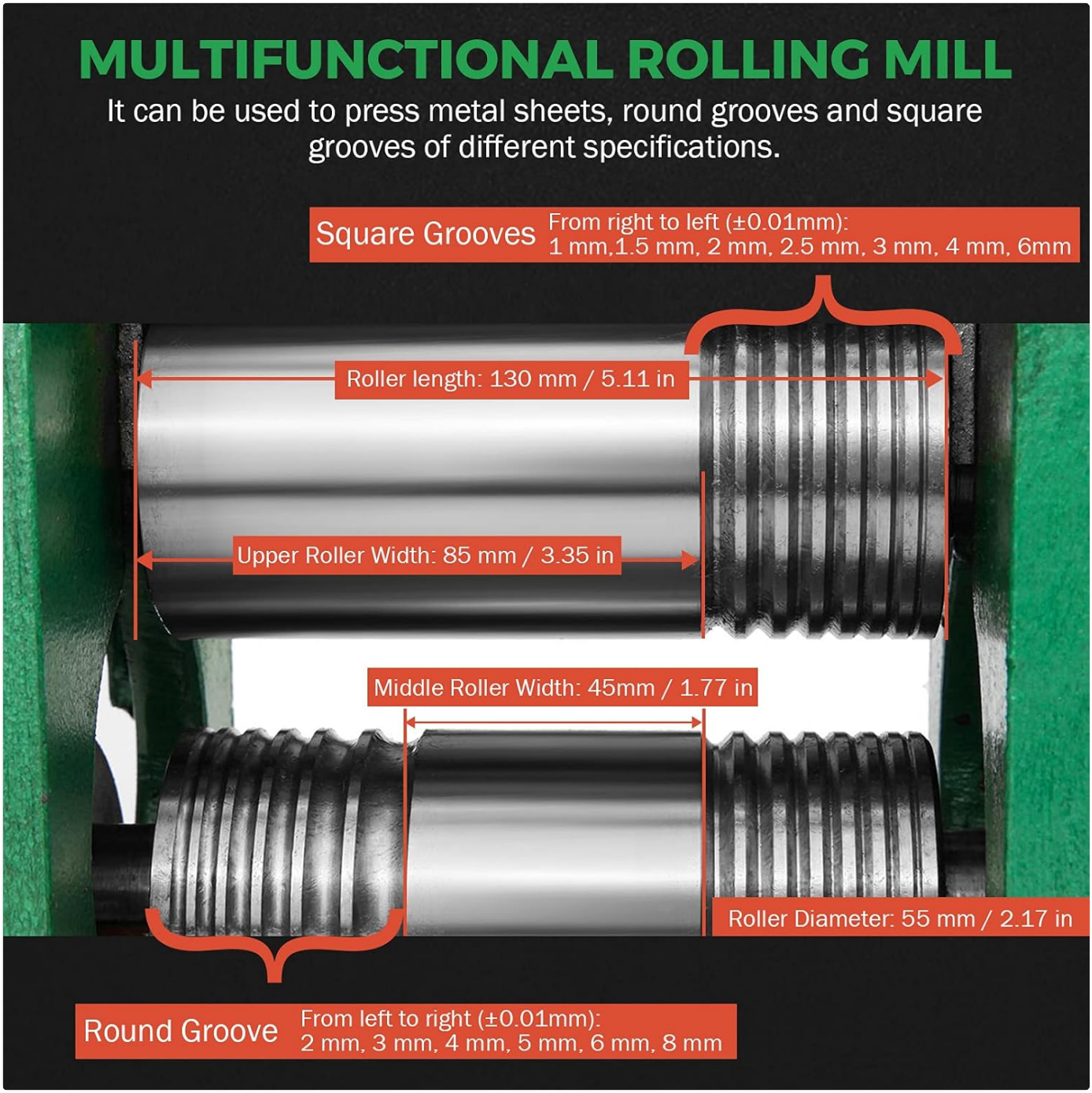


*Figure 3: Roller Dimensions and Groove Specifications. This image provides precise measurements for the rollers and the various groove sizes for different metalworking needs.*

## Setup

Before operating your BEAMNOVA Rolling Mill, proper setup is crucial for stability and safety.

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any signs of damage during transit. Report any damage to the supplier immediately.
2. **Choose a Location:** Select a sturdy, level workbench or surface that can support the weight of the machine (approx. 19.37 kg) and withstand the forces applied during operation.
3. **Secure Mounting:** The base of the rolling mill has pre-drilled holes for permanent mounting. Use appropriate bolts and nuts (not included) to securely fasten the machine to your workbench. This step is critical to prevent the machine from moving or tipping during use.
4. **Clearance:** Ensure there is sufficient clearance around the machine for the hand crank to turn freely and for you to safely feed and retrieve metal.

5. **Initial Inspection:** Before first use, manually turn the hand crank to ensure all gears and rollers move smoothly without obstruction. Check that the gear cover is securely in place.


*Figure 4: User-Friendly Features. This image highlights the adjustable top gears and the stable base, emphasizing the ease of setup and secure mounting.*

## Operating Instructions

Follow these steps for effective and safe operation of your BEAMNOVA Rolling Mill:

### 1. Preparing the Metal

- Ensure your metal (gold, silver, copper, aluminum, etc.) is clean and free of burrs or sharp edges.
- For best results and to prevent damage to the rollers, anneal your metal before rolling, especially if it is thick or has been previously worked. Annealing softens the metal, making it more ductile.

### 2. Adjusting the Rollers

- The distance between the rollers is adjusted using the top gears. Turn the adjustment handle clockwise to decrease the gap (for thinner material) and counter-clockwise to increase it (for thicker material).
- Always make small, gradual adjustments. Do not attempt to reduce the metal thickness drastically in a single pass. This can strain the machine and the metal.
- For initial passes, set the rollers slightly wider than your metal's thickness.

## 3. Rolling Metal Sheets (Flat Rolling)

- Ensure the flat section of the rollers is clean.
- Feed the metal sheet evenly into the gap between the rollers.
- Slowly turn the hand crank. The oversized gear and pinion system will assist in reducing effort.
- Once the metal has passed through, adjust the rollers for a slightly smaller gap and repeat the process.
- Periodically anneal the metal between passes to prevent work hardening and cracking.

## 4. Creating Wires (Square and Round Grooves)

- Identify the desired groove size on the rollers (refer to Figure 3 for available sizes).
- For square wires, start with a larger square groove and gradually reduce the size in subsequent passes.
- For round wires, use the V-shaped grooves, starting with a larger V-groove and progressively moving to smaller ones to gradually reduce the wire diameter.
- Feed the metal wire into the appropriate groove.
- Turn the hand crank steadily.
- As with flat rolling, anneal the wire periodically to maintain ductility.


*Figure 5: Labor-Saving Design. This image highlights the robust gear system and extended hand crank, which contribute to the machine's efficiency and ease of use.*

## Maintenance

Regular maintenance ensures the longevity and optimal performance of your BEAMNOVA Rolling Mill.

- **Cleaning:** After each use, clean the rollers and all exposed metal parts with a soft cloth to remove any metal dust or debris. A mild solvent can be used if necessary, but ensure it does not damage painted surfaces.
- **Lubrication:** Periodically lubricate the gears and roller bearings with a light machine oil or grease. This prevents rust and ensures smooth operation. A user review suggests lubricating rollers after use to prevent oxidation.
- **Inspection:** Regularly inspect the machine for any signs of wear, loose bolts, or damage. Pay close attention to the rollers for any nicks or imperfections that could affect the quality of your work. Check the gear cover for security.
- **Storage:** When not in use, store the rolling mill in a dry, clean environment to prevent rust and corrosion. Covering the machine can help protect it from dust.

## Troubleshooting

This section addresses common issues you might encounter with your rolling mill.

| Problem | Possible Cause | Solution |
|---|---|---|
| Difficulty turning the hand crank. | Rollers set too tight; metal is too thick or not annealed; lack of lubrication. | Loosen rollers slightly; anneal metal before rolling; apply lubricant to gears and bearings. |
| Unevenly pressed metal. | Rollers not parallel; inconsistent feeding of metal; metal not properly annealed. | Ensure rollers are adjusted evenly on both sides; feed metal steadily; anneal metal. |
| Metal cracking or breaking during rolling. | Metal is work-hardened; attempting too large a reduction in one pass. | Anneal metal more frequently; make smaller, more gradual reductions. |
| Rust or corrosion on metal parts. | Lack of lubrication; improper storage; exposure to moisture. | Clean and lubricate regularly; store in a dry environment; consider a protective cover. |
| Loose rollers or excessive play. | Wear on bearings or adjustment mechanism. | Inspect bearings and adjustment components. If wear is significant, contact BEAMNOVA support for potential replacement parts or service. |
| Paint flaking off gears/body. | Normal wear or manufacturing residue. | Clean off flakes to prevent interference. This is primarily cosmetic and does not affect function unless underlying metal rusts. Keep lubricated to prevent rust. |

## Warranty and Support

Your BEAMNOVA Hand Crank Jewelry Rolling Mill Machine is designed for durability and performance. While specific warranty details are not provided in this manual, BEAMNOVA aims to provide quality products and support.

- **Returns:** This product typically comes with a 30-day return policy. Please refer to your purchase platform's return guidelines for specific details.
- **Protection Plans:** Extended protection plans may be available for purchase from third-party providers at the time of sale. These plans offer additional coverage beyond the manufacturer's standard terms.
- **Manufacturer Support:** For any questions regarding product operation, maintenance, or if you encounter issues not covered in the troubleshooting section, please contact BEAMNOVA customer support. Refer to the contact information provided with your purchase or visit the official BEAMNOVA website.
- **Genuine Parts:** Always use genuine BEAMNOVA replacement parts if repairs are needed to ensure compatibility and maintain product integrity.


Model: BI0B03M259-0REFBA

Documents - BEAMNOVA – BI0B03M259-0REFBA
no relevant documents