

Baileigh EW-40 (Model 1004189)

Baileigh EW-40 English Wheel User Manual

Model: EW-40 (1004189)

1. IMPORTANT SAFETY INFORMATION

Read and understand all instructions before operating the Baileigh EW-40 English Wheel. Failure to follow safety guidelines can result in serious injury or property damage.

- Always wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and hearing protection.
- Ensure the machine is securely mounted to a stable surface before use.
- Keep hands and clothing clear of moving parts during operation.
- Do not exceed the machine's rated capacity (16-gauge mild steel, 14-gauge aluminum).
- Disconnect power (if applicable) before performing any maintenance or adjustments.
- Keep the work area clean and well-lit.

2. PRODUCT OVERVIEW

The Baileigh EW-40 English Wheel is a robust metal-forming machine designed for shaping sheet metal. Its heavy-duty construction and versatile tooling allow for precise fabrication of complex curves and panels.



Image: The Baileigh EW-40 English Wheel, a blue-painted metal forming machine with various wheels and anvils.

Key Features:

- **Throat Depth:** Ample 37.75-inch throat depth for forming large panels.
- **Capacity:** Rated for 16-gauge mild steel and 14-gauge aluminum.
- **Upper Wheels:** Includes three 6-inch x 2.25-inch upper wheels.
- **Bottom Anvils:** Nine hardened bottom anvils with various radii (0.125", 0.50", 0.75" edge radii; 6" x 2.24" crown radius; two 2" flat rolls; 0.313" x 0.25" step roll; 0.75", 1.5" bead rolls).
- **Sealed Bearings:** All upper wheels and lower anvils utilize sealed bearings for smooth operation.
- **Swivel Head:** The upper head can rotate 90 degrees, allowing for flexible material positioning.
- **Robust Frame:** Fully welded 5-inch x 5-inch x 0.250-inch box tubing framework ensures rigidity and prevents flex.
- **Tooling Holder:** Integrated tooling holder on the side for convenient storage of rolls.



RUBBER KICK WHEEL

Image: Close-up view of the integrated tooling holder on the side of the English Wheel frame, designed to store various anvils and wheels.

3. SETUP

3.1 Unpacking and Inspection

Carefully unpack all components. Inspect for any shipping damage. Report any damage to the carrier and Baileigh immediately. Verify all parts listed in the packing list are present.

3.2 Mounting the Machine

The EW-40 features a heavy-duty, fully welded frame. For optimal stability and safety, the machine must be securely bolted to a concrete floor or a robust, stable workbench. Use appropriate anchor bolts for your mounting surface.

3.3 Installing Wheels and Anvils

1. Select the desired upper wheel and lower anvil based on the desired metal forming profile.
2. Insert the upper wheel into its housing at the top of the frame. Secure it with the provided pin or fastener.
3. Place the chosen bottom anvil into the lower anvil holder. Ensure it is seated correctly.



6" x 2.25" UPPER WHEELS

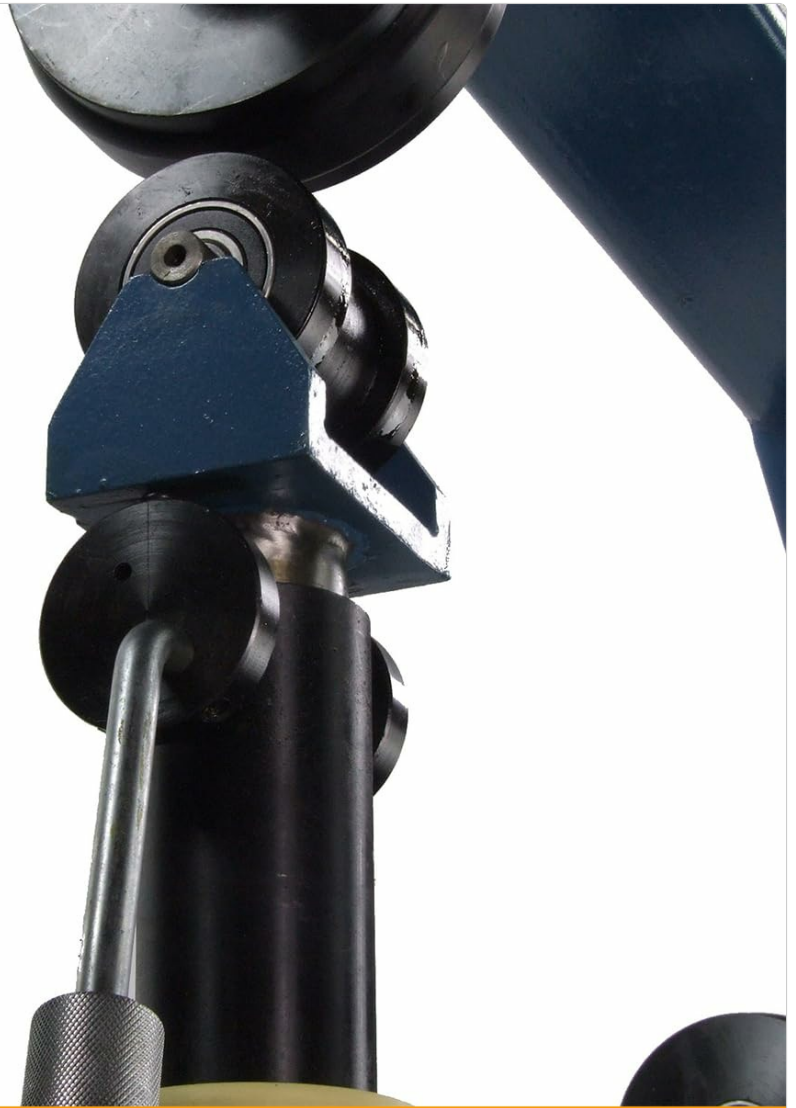
Image: A close-up of the upper wheel storage bracket, showing how spare upper wheels can be securely stored on the machine's frame.

4. OPERATING INSTRUCTIONS

4.1 Adjusting Wheel Pressure

The EW-40 utilizes a rubber kick tensioner to adjust the pressure between the upper wheel and the lower anvil. Rotate

the tensioner clockwise to increase pressure and counter-clockwise to decrease pressure. Start with light pressure and gradually increase as needed for forming.



QUICK-RELEASE CAM LEVER

Image: A detailed view of the rubber kick wheel tensioner located at the base of the lower anvil assembly, used for adjusting forming pressure.

4.2 Using the Quick-Release Cam Lever

The quick-release cam lever allows for rapid adjustment of the lower anvil height, facilitating quick material insertion and removal, or for making significant pressure changes.



UPPER WHEEL ROTATES 90°

Image: Close-up of the quick-release cam lever mechanism, which allows for fast adjustments of the lower anvil's position.

4.3 Swiveling the Upper Head

The upper head of the EW-40 can rotate 90 degrees. This feature allows the operator to push material into the throat either directly or at a 90-degree angle, providing greater flexibility for various forming tasks. To swivel, loosen the locking mechanism, rotate the head to the desired position, and re-secure the lock.



UPPER WHEEL STORAGE BRACKET

Image: The upper wheel assembly shown rotated 90 degrees, demonstrating the machine's versatility in material handling.

4.4 Metal Forming Techniques

English wheeling involves moving sheet metal between the upper wheel and a lower anvil to stretch and shape it. Experiment with different anvils and pressure settings to achieve desired contours. Always make gradual passes and observe the metal's response. For detailed techniques, consult specialized metal forming guides.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Baileigh EW-40 English Wheel.

- **Cleaning:** After each use, clean the upper wheel, lower anvils, and frame to remove metal dust and debris.
- **Lubrication:** The sealed bearings on the wheels and anvils require minimal lubrication. Periodically check for

smooth rotation. Apply a light machine oil to pivot points and adjustment threads as needed.

- **Inspection:** Regularly inspect all components for wear, damage, or loose fasteners. Pay close attention to the condition of the wheels and anvils. Replace worn or damaged parts immediately.
- **Storage:** Store the machine in a dry environment to prevent rust.

6. TROUBLESHOOTING

6.1 Uneven Forming / Inconsistent Shape

- **Cause:** Uneven pressure, incorrect anvil selection, or inconsistent material movement.
- **Solution:** Ensure even pressure distribution. Verify the correct anvil profile for the desired shape. Practice consistent and smooth movement of the workpiece.

6.2 Difficulty Adjusting Pressure

- **Cause:** Threads on the tensioner or cam lever may be dirty or dry.
- **Solution:** Clean threads and apply a light lubricant. Check for any obstructions.

6.3 Excessive Flex in Frame

- **Cause:** Machine not securely mounted, or exceeding material capacity.
- **Solution:** Ensure the machine is firmly bolted to a stable surface. Do not attempt to form material thicker than the specified capacity.

7. SPECIFICATIONS

Feature	Specification
Model Number	EW-40 (1004189)
Throat Depth	37.75 inches
Mild Steel Capacity	16 Gauge
Aluminum Capacity	14 Gauge
Upper Wheels	3 (6 inches x 2.25 inches)
Bottom Anvils	9 (0.125", 0.50", 0.75" edge radii; 6" x 2.24" crown radius; two 2" flat rolls; 0.313" x 0.25" step roll; 0.75", 1.5" bead rolls)

Feature	Specification
Frame Construction	Fully welded 5" x 5" x 0.250" box tubing
Package Dimensions	67 x 48 x 14 inches
Weight	407 Pounds

8. WARRANTY AND SUPPORT

The Baileigh EW-40 English Wheel is covered by a one-year parts warranty. Baileigh also provides lifetime technical support by phone for this product.



Image: A graphic indicating a 1-year warranty for the product.

For technical assistance or warranty claims, please contact Baileigh customer service directly. Refer to your purchase documentation for contact details or visit the official Baileigh website.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question