

[Manuals.plus](#) /

› [WEN](#) /

› WEN BG4276 2.1-Amp 6-Inch Single Speed Bench Grinder Instruction Manual

WEN BG4276

WEN BG4276 2.1-Amp 6-Inch Single Speed Bench Grinder Instruction Manual

Model: BG4276 | Brand: WEN

1. INTRODUCTION

This manual provides essential information for the safe operation, maintenance, and troubleshooting of your WEN BG4276 2.1-Amp 6-Inch Single Speed Bench Grinder. This tool is designed for deburring ragged edges, cleaning objects, and sharpening various blades and tools. Please read this manual thoroughly before initial use to ensure proper function and safety.



Image 1.1: Front view of the WEN BG4276 Bench Grinder, showcasing its compact design, two grinding wheels, adjustable eye guards, and integrated flexible work light.

2. SAFETY INFORMATION

Always prioritize safety when operating power tools. Failure to follow these instructions may result in serious injury or property damage.

- **Eye Protection:** Always wear ANSI Z87.1 approved safety glasses or a face shield during operation to protect against flying debris and sparks.
- **Work Area:** Ensure your work area is clean, well-lit, and free from clutter. Keep children and bystanders away.
- **Stable Mounting:** Securely mount the bench grinder to a workbench or stand to prevent movement during operation.
- **Proper Attire:** Do not wear loose clothing, gloves, neckties, or jewelry that could become entangled in moving parts. Tie back long hair.
- **Guards in Place:** Never operate the grinder without the wheel guards and eye shields properly installed and adjusted.
- **Work Rests:** Adjust work rests to within 1/16 inch (1.6 mm) of the grinding wheel to prevent the workpiece from being wedged between the rest and the wheel.
- **Ventilation:** Operate in a well-ventilated area to disperse grinding dust.
- **Unplug When Not in Use:** Disconnect the grinder from the power source before making adjustments, changing accessories, or performing maintenance.
- **Inspect Wheels:** Before each use, inspect grinding wheels for cracks, chips, or damage. Replace damaged wheels immediately.

3. COMPONENTS

The WEN BG4276 Bench Grinder includes the following main components:

- Grinder Motor Housing
- 6-inch, 60-Grit Grinding Wheel (for general purpose grinding)
- 6-inch, 36-Grit Grinding Wheel (for faster material removal)
- Adjustable Eye Guards (2)
- Work Rests (2)
- Flexible Work Light
- Power Switch



Image 3.1: Angled view of the WEN BG4276 Bench Grinder, highlighting the two grinding wheels, their protective covers, and the flexible work light positioned above the left wheel.

4. SETUP AND ASSEMBLY

Follow these steps to set up your bench grinder for safe operation:

1. **Mounting the Grinder:** Secure the grinder to a sturdy workbench using bolts through the mounting holes in the base. This prevents the grinder from moving during use.
2. **Attaching Work Rests:** Install the work rests in front of each grinding wheel. Adjust them so the gap between the work rest and the grinding wheel is no more than 1/16 inch (1.6 mm). Ensure they are level with the center of the wheel or slightly below.
3. **Installing Eye Guards:** Attach the clear eye guards to the grinder. Position them to provide maximum protection without obstructing your view of the workpiece. Tighten securely.
4. **Flexible Work Light:** The flexible work light is pre-installed. Ensure the bulb is securely seated. Adjust its position to illuminate your workpiece effectively.
5. **Power Connection:** Before plugging in, ensure the power switch is in the "OFF" position. Connect the grinder to a grounded 120V, 60Hz AC power outlet.



Image 4.1: A close-up view demonstrating the adjustment of the work rest on the WEN BG4276 Bench Grinder, ensuring proper spacing from the grinding wheel for safe operation.

5. OPERATING INSTRUCTIONS

Once the grinder is properly set up and all safety precautions are observed, you can begin operation.

1. **Power On:** Flip the power switch to the "ON" position. Allow the grinding wheels to reach full speed (3450 RPM)

before beginning work.

2. **Using the Work Light:** Turn on the flexible work light to illuminate the grinding area, improving visibility and precision.
3. **Grinding Technique:**
 - Hold the workpiece firmly against the work rest.
 - Apply light, even pressure against the grinding wheel. Avoid excessive force, which can damage the wheel or motor.
 - Move the workpiece slowly and consistently across the face of the wheel to ensure even wear and prevent grooving.
 - For sharpening, maintain the correct angle of the tool against the wheel.
 - Use the 36-grit wheel for faster material removal and the 60-grit wheel for finer grinding and finishing.
4. **Cooling Workpiece:** Grinding generates heat. Periodically cool the workpiece in water to prevent overheating, which can alter the temper of metal tools.
5. **Power Off:** When finished, flip the power switch to the "OFF" position. Wait for the wheels to come to a complete stop before leaving the grinder unattended.



Image 5.1: A user operating the WEN BG4276 Bench Grinder, demonstrating the process of grinding a metal object, with sparks visible, emphasizing the importance of eye protection.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your bench grinder.

- **Cleaning:** After each use, unplug the grinder and clean off grinding dust and debris using a brush or vacuum. Do not use solvents.
- **Wheel Inspection:** Regularly inspect grinding wheels for wear, cracks, or damage. A worn wheel can be dressed with

a wheel dresser to restore its cutting surface. Replace wheels that are cracked or excessively worn.

- **Wheel Replacement:** To replace a wheel, unplug the grinder. Remove the wheel guard and the retaining nut. Replace the wheel, ensuring the blotter paper is against the flanges. Reassemble and tighten securely. The design allows for simple wheel guard removal for easy changes.
- **Work Rest Adjustment:** Periodically check and adjust the work rests to maintain the 1/16 inch (1.6 mm) gap from the grinding wheel.
- **Motor Ventilation:** Keep the motor ventilation openings clear of dust and debris to prevent overheating.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your bench grinder.

Problem	Possible Cause	Solution
Grinder does not start.	No power, faulty switch, motor overload.	Check power cord and outlet. Ensure switch is ON. Allow motor to cool if overloaded.
Excessive vibration.	Loose mounting, unbalanced wheel, damaged wheel.	Securely mount grinder. Dress or replace unbalanced/damaged wheels.
Grinding wheel not cutting effectively.	Glazed or dull wheel, incorrect wheel for material.	Dress the grinding wheel to expose fresh abrasive. Ensure appropriate grit wheel is used.
Motor overheats.	Excessive load, poor ventilation.	Reduce pressure on workpiece. Clear motor ventilation openings. Allow motor to cool.

8. SPECIFICATIONS

Key technical specifications for the WEN BG4276 Bench Grinder:

- Model:** BG4276
- Motor:** 2.1 Amp
- Voltage:** 120V, 60Hz
- No-Load Speed:** 3450 RPM
- Grinding Wheel Size:** 6 inches (diameter) x 3/4 inch (thickness)
- Arbor Size:** 1/2 inch
- Included Grits:** 36-grit, 60-grit
- Product Dimensions (L x W x H):** 14" x 9.8" x 15"
- Item Weight:** Approximately 16 Pounds
- Power Source:** Corded Electric



Image 8.1: Diagram illustrating the key dimensions of the WEN BG4276 Bench Grinder, including length (14"), width (9.8"), and height (15").

9. WARRANTY AND SUPPORT

The WEN BG4276 2.1-Amp 6-Inch Single Speed Bench Grinder is backed by a two-year warranty. This warranty covers defects in material and workmanship under normal use.

For warranty claims, technical assistance, or to inquire about replacement parts, please contact WEN customer service. Keep your purchase receipt as proof of purchase.

For more information, you may visit the official WEN website or contact their customer support line.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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

Open the live page

<https://manuals.plus/asin/B08ZVTC2VK>

More documents and user manuals: <https://manuals.plus/>