

DEWALT DW831

DEWALT DW831 5-Inch Medium Angle Grinder User Manual

Model: DW831

1. INTRODUCTION

This manual provides essential instructions for the safe operation, maintenance, and setup of your DEWALT DW831 5-Inch Medium Angle Grinder. Please read this manual thoroughly before using the tool to ensure proper function and safety. The DEWALT DW831 is a powerful 5-inch angle grinder designed for fast material removal. It features a 12 Amp motor operating at 11,000 RPM, providing high speed for efficient grinding and cutting tasks. Its design prioritizes a high power-to-weight ratio, aiming to reduce user fatigue during extended operation.



Figure 1: The DEWALT DW831 5-Inch Medium Angle Grinder, showing its yellow and black housing, side handle, and grinding wheel.

2. SAFETY INSTRUCTIONS

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury when using power tools. Keep this manual for future reference.

General Power Tool Safety Warnings:

- **Work Area Safety:** Keep your work area clean and well-lit. Cluttered or dark areas invite accidents. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.

- **Electrical Safety:** Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges, and refrigerators.
- **Personal Safety:** Always wear eye protection. Use safety glasses, goggles, or a face shield. Wear hearing protection when operating the tool for extended periods. Dress properly; do not wear loose clothing or jewelry. Keep hair, clothing, and gloves away from moving parts.
- **Tool Use and Care:** Do not force the power tool. Use the correct power tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Specific Grinder Safety:** Always ensure the guard is properly installed and adjusted to redirect sparks away from the user. Use only accessories rated for the grinder's speed. Secure the workpiece before grinding.

3. COMPONENTS AND FEATURES

The DEWALT DW831 angle grinder comes with several key components and features designed for performance and user convenience.

Included Components:

- Grinding Wheel
- Wrench
- Backing Flange
- Clamp Nut
- Keyless Adjustable Guard
- Two-Position Side Handle

Key Features:

- **Powerful Motor:** 12 Amp AC/DC motor delivers 11,000 RPM for rapid material removal.
- **High Power-to-Weight Ratio:** Engineered for efficiency and reduced user fatigue.
- **Adjustable Guard:** Keyless adjustable guard allows for quick positioning to redirect sparks.
- **Rear Handle Design:** Provides enhanced comfort and control during operation.
- **External Brush Caps:** Facilitates easy servicing and maintenance of motor brushes.
- **Sealed Bearings:** Ball and roller bearings are sealed for extended motor life.
- **AC/DC Capacity:** Compatible with both AC power outlets and DC power sources like welding machines and generators.

4. SETUP

Before operating your angle grinder, ensure all components are correctly assembled and secured.

4.1 Attaching the Guard

1. Ensure the tool is unplugged from the power source.
2. Place the keyless adjustable guard over the spindle housing.
3. Rotate the guard to the desired position, ensuring it provides maximum protection and redirects sparks away from you.
4. Tighten the guard securely using its locking mechanism.

4.2 Installing the Side Handle

The two-position side handle can be installed on either side of the gear case for optimal control and comfort, depending on your application and handedness.

1. Screw the side handle firmly into one of the threaded holes on the gear case.

2. Ensure it is tightened securely before operation.

4.3 Mounting the Grinding Wheel

1. Unplug the tool.
2. Press and hold the spindle lock button.
3. Place the backing flange onto the spindle.
4. Position the grinding wheel onto the backing flange, ensuring it is centered.
5. Thread the clamp nut onto the spindle and tighten it firmly using the provided wrench while holding the spindle lock button.
6. Release the spindle lock.



Figure 2: The DEWALT DW831 Angle Grinder being used for material removal, demonstrating proper grip with the side handle.

5. OPERATING INSTRUCTIONS

Always wear appropriate personal protective equipment (PPE), including eye protection, hearing protection, and gloves, before operating the grinder.

5.1 Powering On and Off

- **To Turn On:** Plug the tool into a suitable power outlet. Slide the on/off switch to the "ON" position. The grinder will immediately begin to spin.
- **To Turn Off:** Slide the on/off switch to the "OFF" position. Wait for the wheel to come to a complete stop before setting the tool down.

5.2 Grinding and Cutting Techniques

- Always hold the grinder firmly with both hands, one on the main handle and one on the side handle.
- Allow the wheel to reach full speed before contacting the workpiece.
- Apply light, even pressure. Do not force the tool, as this can lead to kickback or damage the wheel/motor.
- For grinding, maintain a shallow angle (typically 15-30 degrees) between the wheel and the workpiece surface.
- For cutting, use a cutting wheel and hold the tool perpendicular to the workpiece, making straight cuts. Avoid twisting or bending the cutting wheel.
- Ensure proper ventilation in your work area, especially when generating dust or sparks.



Figure 3: The DEWALT DW831 Angle Grinder being used to clean a metal surface, illustrating the tool's application in metal preparation.

6. MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your DEWALT DW831 angle grinder. Always unplug the tool before performing any maintenance.

6.1 Cleaning

- Periodically clean the tool's ventilation openings to prevent overheating. Use a soft brush or compressed air.
- Wipe down the exterior of the tool with a damp cloth. Do not use harsh chemicals or abrasive cleaners.

6.2 Carbon Brush Replacement

The DW831 features external brush caps for easy access to the carbon brushes. Worn brushes can lead to reduced performance or motor damage.

1. Unplug the tool.
2. Locate the external brush caps on the motor housing.
3. Unscrew the caps and carefully remove the old carbon brushes.
4. Insert new DEWALT genuine replacement carbon brushes, ensuring they are oriented correctly.
5. Screw the brush caps back on securely.

6.3 Cord Inspection

Regularly inspect the power cord for any signs of damage, cuts, or fraying. A damaged cord must be replaced by a qualified service technician to prevent electrical hazards.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your angle grinder. For problems not listed here, contact DEWALT customer service.

Problem	Possible Cause	Solution
Tool does not start	No power supply; Faulty switch; Worn carbon brushes	Check power connection; Test outlet; Replace switch; Replace carbon brushes.
Reduced power or intermittent operation	Worn carbon brushes; Loose connections; Overload	Replace carbon brushes; Check power cord and connections; Reduce load on tool.
Excessive vibration	Damaged or unbalanced wheel; Loose clamp nut; Bent spindle	Replace wheel; Tighten clamp nut; Contact service for spindle repair.
Overheating	Blocked ventilation; Continuous heavy use; Overload	Clean ventilation openings; Allow tool to cool; Reduce load and operating time.

8. SPECIFICATIONS

Technical specifications for the DEWALT DW831 5-Inch Medium Angle Grinder.

Model: DW831

Power Source: Corded Electric

Voltage: 120 Volts

Amperage: 12 Amps

Wattage: 1440 Watts

Maximum Rotational Speed: 11,000 RPM

Wheel Diameter: 5 Inches

Item Weight: 7.4 Pounds

Product Dimensions: 18.7 x 7.48 x 5.91 inches

Material: Blend
Color: Yellow
UPC: 028875108317

9. WARRANTY AND SUPPORT

DEWALT provides a limited warranty for its products. Specific warranty terms and conditions are typically included with your product purchase documentation. For detailed warranty information, service, or technical support, please refer to the official DEWALT website or contact their customer service department.
You can visit the official DEWALT store for more information: [DEWALT Store](#)

© 2023 DEWALT. All rights reserved.

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