

## DEWALT DCE531B

# DEWALT DCE531B 20V MAX\* Pencil Vibrator Instruction Manual

Model: DCE531B

## 1. INTRODUCTION AND OVERVIEW

The DEWALT DCE531B 20V MAX\* Pencil Vibrator is designed for consolidating concrete in various applications. This tool is suitable for both industrial and residential contractors, providing efficient removal of air bubbles from freshly poured concrete to improve strength and finish.

Key features include:

- **4-foot long flexible shaft:** Provides extended reach and ease of use in various concrete forms.
- **1-1/8 inch diameter vibrator:** Delivers maximum consolidation power for effective air removal.
- **14,000 Vibrations Per Minute (VPM) under load:** Ensures maximum consolidation efficiency.

This is a bare tool item; the battery and charger are sold separately.



Figure 1: Full view of the DEWALT DCE531B 20V MAX\* Pencil Vibrator.

## 2. SAFETY INFORMATION

**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Always observe basic safety precautions when using power tools to reduce the risk of injury. Read and understand all instructions before operating this tool.

- **Wear Eye Protection:** Always wear appropriate eye protection that complies with ANSI Z87.1.
- **Keep Work Area Clear:** Ensure the work area is well-lit and free from obstructions.
- **Avoid Wet Conditions:** Do not operate power tools in damp or wet locations.

- **Secure Battery:** Ensure the battery pack is securely attached before operation.
- **Proper Grip:** Maintain a firm grip on the tool handle during operation.
- **Inspect Tool:** Before each use, inspect the tool for any damage or loose parts. Do not use if damaged.

### 3. PACKAGE CONTENTS

Your DEWALT DCE531B Pencil Vibrator package includes:

- (1) DCE531 Pencil Vibrator

**Note:** Battery and charger are not included and must be purchased separately.

### 4. SPECIFICATIONS

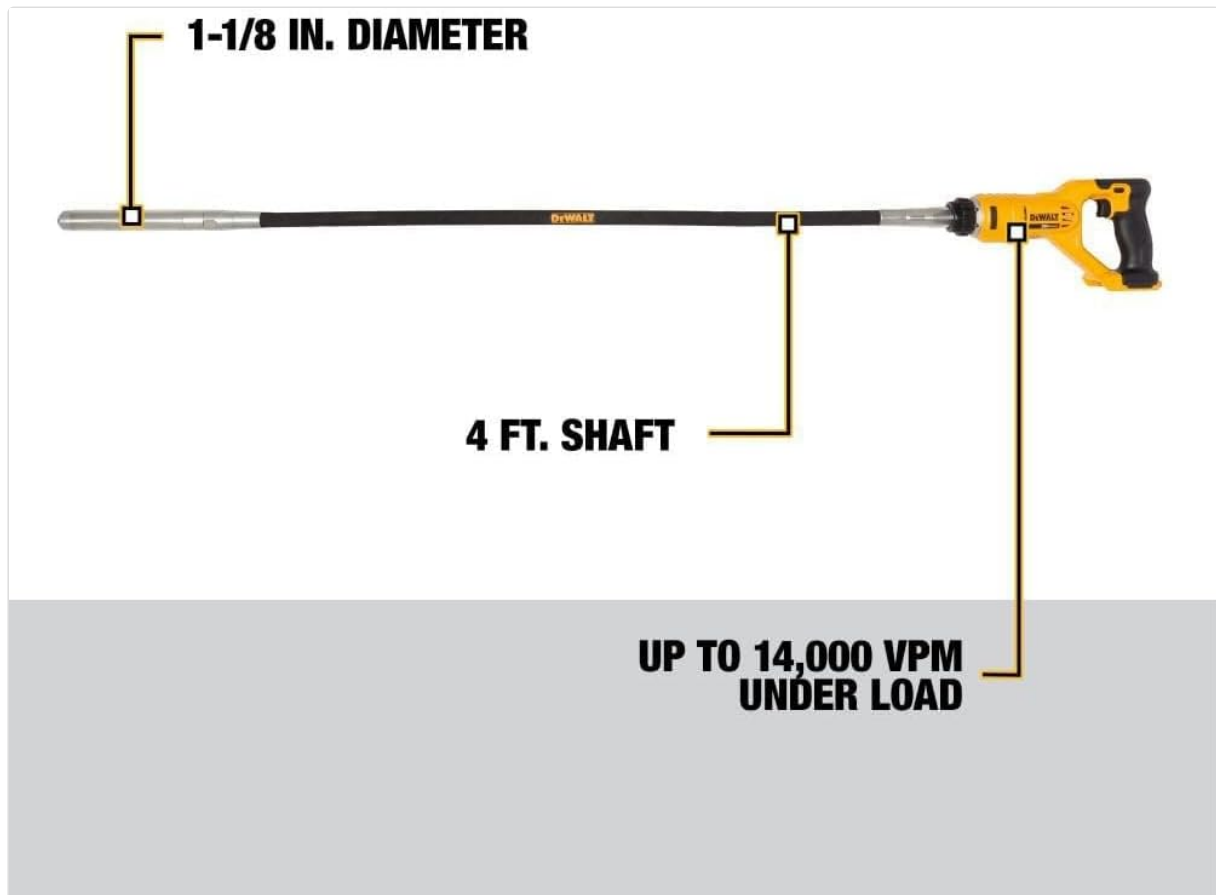


Figure 2: Key dimensions and specifications of the DEWALT DCE531B.

Specification	Value
Manufacturer	DEWALT
Model Number	DCE531B
Power Source	Battery powered
Voltage	20 Volts (MAX*)
Vibrator Diameter	1-1/8 inches
Shaft Length	4 feet

Specification	Value
Vibrations Per Minute (VPM)	14,000 (under load)
Item Weight	8 pounds
Product Dimensions	45 x 3.5 x 8 inches
Batteries Required?	Yes
Batteries Included?	No

## 5. SETUP

Before operating the DEWALT DCE531B Pencil Vibrator, ensure proper setup:

- Battery Preparation:** This tool requires a DEWALT 20V MAX\* battery (sold separately). Ensure the battery is fully charged using a compatible DEWALT charger.
- Attaching the Battery:** Align the battery pack with the receptacle on the tool handle. Slide the battery into the tool until it clicks securely into place. Do not force the battery.
- Removing the Battery:** To remove the battery, press the battery release button (usually located on the battery itself) and slide the battery out of the tool.
- Inspect the Tool:** Before each use, visually inspect the flexible shaft and vibrator head for any signs of damage, cracks, or excessive wear. Ensure all connections are tight.



Figure 3: Close-up view of the motor and handle, showing battery connection area.

## 6. OPERATING INSTRUCTIONS

Follow these steps for effective concrete consolidation:

- Prepare the Concrete:** Ensure the concrete mix is appropriate for the application and has the correct slump.
- Insert the Vibrator:** Gently insert the vibrator head into the wet concrete. Allow the vibrator to penetrate the concrete under its own weight. Do not push or force it.
- Systematic Vibration:** Move the vibrator slowly through the concrete in a systematic pattern, ensuring that all areas are consolidated evenly. Overlap each vibration zone slightly.
- Observe Air Bubbles:** As the vibrator operates, air bubbles will rise to the surface. Continue vibrating

until the surface appears smooth and no more large air bubbles are escaping.

5. **Avoid Over-Vibration:** Do not over-vibrate the concrete, as this can lead to segregation of aggregates and cement paste, weakening the concrete. Typical vibration time per insertion is 5-15 seconds, depending on concrete consistency and depth.
6. **Withdraw Slowly:** Slowly withdraw the vibrator from the concrete to allow the concrete to flow back into the void created by the vibrator head. Rapid withdrawal can create new air pockets.
7. **Maintain Contact:** Keep the vibrator head immersed in the concrete at all times during operation. Do not allow the vibrator head to hit the bottom or sides of the formwork excessively.

## 7. MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your DEWALT DCE531B Pencil Vibrator:

- **Cleaning After Use:** Immediately after each use, clean the vibrator shaft and head thoroughly to prevent concrete buildup. Hardened concrete can impair performance and cause damage. Use a stiff brush and water, avoiding harsh chemicals that could damage materials.
- **Inspection:** Regularly inspect the flexible shaft for any kinks, cuts, or signs of wear. Check the vibrator head for dents, cracks, or excessive abrasion.
- **Storage:** Store the tool in a clean, dry, and secure location, away from direct sunlight, moisture, and extreme temperatures.
- **Battery Care:** Follow the battery manufacturer's instructions for charging, storage, and maintenance of your 20V MAX\* battery packs.

## 8. TROUBLESHOOTING

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If you encounter issues with your DEWALT DCE531B Pencil Vibrator, refer to the following common problems and solutions:

- **Tool Not Starting:**
  - Ensure the battery pack is fully charged and properly inserted into the tool.
  - Check for any obstructions around the battery terminals or tool switch.
  - If the tool has been exposed to extreme temperatures, allow it to return to a moderate temperature range.
- **Ineffective Vibration / Weak Performance:**
  - Verify the battery is fully charged. Low battery power can reduce performance.
  - Ensure the vibrator head is fully immersed in the concrete and not hitting the formwork or rebar excessively.
  - Inspect the flexible shaft and vibrator head for any damage or excessive concrete buildup that might impede vibration.
  - Ensure the concrete mix is not too stiff or dry for effective vibration.
- **Excessive Noise or Vibration from Tool Body:**
  - Discontinue use immediately. This may indicate internal damage. Contact DEWALT service for inspection.

For issues not covered here, or if troubleshooting steps do not resolve the problem, contact DEWALT

customer support.

## 9. WARRANTY AND SUPPORT

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### Warranty Information:

The DEWALT DCE531B Pencil Vibrator comes with a **3-year limited warranty**. This warranty covers defects in material or workmanship for three years from the date of purchase. For specific terms, conditions, and exclusions, please refer to the official DEWALT warranty statement or contact DEWALT customer service.

### Customer Support:

For technical assistance, warranty claims, or to locate an authorized service center, please visit the official DEWALT website or contact their customer service department. Keep your proof of purchase for warranty validation.