Diamond Products DK12

Diamond Products Weka DK12 Handheld Core Drill User Manual

Model: DK12

Introduction Safety Instructions Setup Operation Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

Thank you for choosing the Diamond Products Weka DK12 Handheld Core Drill. This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your new core drill. Please read this manual thoroughly before operating the tool and keep it for future reference. The DK12 is designed for professional wet coring applications, offering three speeds for optimal performance with various bit sizes.



Figure 1: Diamond Products Weka DK12 Handheld Core Drill. This image shows the core drill unit with its main body, motor housing, and chuck assembly.

2. General Safety Instructions

Always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury. Failure to follow these instructions may result in serious injury or death.

- **Personal Safety:** Always wear appropriate personal protective equipment (PPE) including safety glasses, hearing protection, gloves, and sturdy footwear. Do not wear loose clothing or jewelry that could get caught in moving parts.
- **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:** Ensure the power supply matches the voltage specified on the tool. Avoid body contact with grounded surfaces. Do not expose power tools to rain or wet conditions. Never carry the tool by its power cord.
- **Tool Use and Care:** Do not force the tool. Use the correct tool for your application. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools.
- **Water Connection:** This tool is designed for wet coring. Ensure the water connection is secure and free of leaks. Never operate the drill without proper water flow during wet coring to prevent overheating and damage to the core bit.
- **Thermal Overload Protection:** The drill is equipped with thermal overload protection. If the motor overheats, the tool will shut off automatically. Allow the tool to cool down before resuming operation.

3. Setup

3.1 Unpacking and Inspection

Carefully remove the core drill and all accessories from the carrying case. Inspect the tool for any signs of damage that may have occurred during shipping. If any damage is found, do not operate the tool and contact your supplier immediately.
Included Components:

- Weka DK12 Core Drill Unit
- Plastic molded carrying case
- Side handle
- 1/2" BSP male to 5/8-11 male adapter
- Wrench

3.2 Attaching the Side Handle

The side handle provides additional stability and control during handheld operation. Thread the side handle into the designated mounting point on the drill housing. Tighten securely by hand.

3.3 Connecting Water Supply (Wet Coring Only)

The DK12 is designed for wet coring. A continuous water supply is crucial for cooling the core bit and flushing debris. Connect a water hose to the water connection port on the drill. Ensure all connections are tight to prevent leaks. Use the provided 1/2" BSP male to 5/8-11 male adapter if necessary for your core bit connection.

3.4 Installing Core Bits

Before installing or removing core bits, ensure the drill is disconnected from the power supply.

1. Ensure the spindle thread (5/8"-11 or 1 250"-7) matches the core bit. Use the adapter if needed.
2. Thread the core bit onto the drill spindle by hand until snug.
3. Use the provided wrench to firmly tighten the core bit onto the spindle. Do not overtighten.

4. Operation

4.1 Powering On/Off

Connect the power cord to a suitable 115V AC power outlet. The drill features a soft start mechanism for smooth power-up. To start the drill, press the ON switch. To stop, release the switch or press the OFF button if applicable.

4.2 Speed Selection

The DK12 offers three speed settings to optimize performance for different core bit diameters and materials. Select the

appropriate speed using the gear selector switch:

- **Low Speed:** For larger diameter core bits (e.g., 3" handheld, up to 6" mounted) and harder materials.
- **Medium Speed:** For medium diameter core bits.
- **High Speed:** For smaller diameter core bits and softer materials.

Always select the speed before starting the drill. Do not attempt to change speeds while the drill is running.

4.3 Coring Procedure (Wet Coring)

1. Mark the drilling location accurately. The drill features two leveling bubbles for precise positioning.
2. Ensure the water supply is turned on and flowing through the drill and core bit.
3. Position the core drill firmly against the surface. For handheld operation, maintain a stable stance and use the side handle for control. For larger bits (over 3"), mounting the drill on a stand is recommended for safety and stability.
4. Start the drill and apply steady, even pressure. Avoid excessive force, which can lead to overheating and premature wear of the bit and motor. Let the drill and bit do the work.
5. Maintain continuous water flow throughout the coring process.
6. Once the desired depth is reached or the core is cut, release the trigger and allow the bit to stop completely before removing the drill from the hole.
7. Turn off the water supply after completing the coring operation.

4.4 Thermal Overload Protection

The DK12 is equipped with a thermal overload protection switch. If the motor becomes too hot due to excessive load or insufficient cooling, the protection system will automatically shut down the drill to prevent damage. If this occurs:

1. Release the trigger and disconnect the drill from the power supply.
2. Allow the drill to cool down for several minutes.
3. Identify and rectify the cause of the overload (e.g., reducing feed pressure, ensuring adequate water flow, using the correct speed setting).
4. Reconnect the power and resume operation.

5. Maintenance

Regular maintenance ensures the longevity and optimal performance of your core drill. Always disconnect the drill from the power supply before performing any maintenance.

5.1 Cleaning

- After each use, clean the drill thoroughly to remove concrete slurry, dust, and debris.
- Wipe down the exterior with a damp cloth. Do not use harsh chemicals or solvents.
- Ensure the water connection port and spindle threads are free of blockages and debris.

5.2 Inspection

- Regularly inspect the power cord for cuts, fraying, or damage. Replace damaged cords immediately.
- Check the side handle and other fasteners for tightness.
- Inspect core bits for wear and damage. Replace worn bits to maintain drilling efficiency and prevent strain on the drill.
- Periodically check the carbon brushes. Worn brushes can lead to reduced performance or motor damage. Replacement should be performed by qualified personnel.

5.3 Storage

Store the core drill in its original carrying case in a dry, secure location, out of reach of children. Protect it from moisture and extreme temperatures.

6. Troubleshooting

This section addresses common issues you might encounter with your DK12 core drill. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Drill does not start.	No power supply; Thermal overload activated; Damaged power cord/switch.	Check power connection; Allow drill to cool down; Inspect power cord/switch, seek professional repair if damaged.
Drill stops during operation.	Thermal overload activated; Excessive load; Power interruption.	Allow drill to cool, reduce feed pressure; Check power supply.
Reduced drilling performance.	Worn core bit; Insufficient water flow; Incorrect speed setting.	Replace core bit; Ensure adequate water supply; Select appropriate speed for material and bit size.
Excessive vibration.	Loose core bit; Damaged core bit; Unstable mounting.	Tighten core bit; Replace damaged core bit; Ensure drill is securely mounted or held.
Water leakage.	Loose water connection; Damaged hose/seal.	Tighten connections; Inspect and replace damaged components.

7. Technical Specifications

Feature	Specification
Model Number	DK12
Brand	Diamond Products
Power Source	AC
Voltage	115 volts
Amperage	13.9 A
Maximum Power	1600 watts
Number of Speeds	3
Maximum Rotational Speed	4400 rpm
Drilling Capacity (Wood)	3 inches (handheld), up to 6 inches (mounted)
Drilling Capacity (Metal)	2 inches

Feature	Specification
Spindle Thread	5/8"-11 or 1 250"-7
Included Components	Carrying case, side handle, 1/2" BSP male to 5/8-11 male adapter, wrench
Material Type	Steel
Color	Black, Orange

8. Warranty & Support

Diamond Products stands behind the quality of its tools. For specific warranty information, please refer to the warranty card included with your product or visit the official Diamond Products website. Keep your purchase receipt as proof of purchase. For technical support, service, or to order replacement parts, please contact Diamond Products customer service. Contact information can typically be found on the product packaging or the official company website.

- **Online Support:** Visit the Diamond Products official website for FAQs, product registration, and service center locations.
- **Customer Service:** Refer to your product documentation for direct contact numbers or email addresses.

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