

DMK DHCP300

ZBTK DHCP300 Handheld Laser Cleaning Head User Manual

Model: DHCP300

1. INTRODUCTION

The ZBTK DHCP300 Handheld Laser Cleaning Head is an advanced tool designed for efficient and precise cleaning of various surfaces, including metal and wood. It utilizes double-axis pulse technology to effectively remove dirt, grime, rust, and other contaminants without damaging the base material. Its ergonomic handheld design ensures ease of use and control, making it suitable for a wide range of cleaning applications in industrial and professional settings.



Figure 1: ZBTK DHCP series Dual-axis Pulse Laser Cleaning Head overview.

2. SAFETY INFORMATION

Operating laser equipment requires strict adherence to safety protocols to prevent injury and damage. Please read and understand all safety warnings before operating the device.

- Always wear appropriate laser safety goggles (OD 7+ for the specific laser wavelength) when operating the laser cleaning head.
- Ensure the work area is clear of flammable materials and personnel not wearing protective equipment.
- Do not point the laser at people or animals.
- Avoid direct exposure to the laser beam, even reflected beams.
- Ensure proper ventilation in the work area to dissipate any fumes or particles generated during cleaning.
- Disconnect power before performing any maintenance or inspection.
- Only qualified personnel should perform repairs or modifications.

3. PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- ZBTK Original DHCP300 Handheld Laser Cleaning Head * 1
- (Additional components such as control unit, cables, power supply, and safety goggles may be included depending on the specific kit purchased.)



Figure 2: Front and side views of the DHCP300 Handheld Laser Cleaning Head.

4. SETUP

Follow these steps to set up your ZBTK DHCP300 Handheld Laser Cleaning Head:

1. **Unpacking:** Carefully remove all components from the packaging. Inspect for any signs of damage during transit.
2. **Placement:** Position the laser cleaning system (including the control unit and power supply, if separate) on a stable, level surface in a well-ventilated area.
3. **Connect the Handheld Head:** Connect the DHCP300 handheld laser cleaning head to the main control unit using the provided cables. Ensure all connections are secure.
4. **Power Connection:** Connect the power supply to the control unit and then plug the power supply into a grounded electrical outlet.
5. **Safety Gear:** Before powering on, ensure all operators and personnel in the vicinity are wearing appropriate laser safety goggles.
6. **Initial Boot-up:** Power on the system. The control unit display should illuminate.



Figure 3: Laser cleaning system control unit and handheld head.

5. OPERATING INSTRUCTIONS

This section outlines the general operating procedures for the DHCP300 laser cleaning head. Refer to the control unit's specific interface for detailed menu navigation.

5.1. Pre-Operation Checks

- Verify all cables are securely connected.
- Confirm the work area is prepared and safety measures are in place.
- Ensure the laser head lens is clean and free of debris.

5.2. Basic Operation

1. **Power On:** Turn on the main power switch on the control unit.
2. **System Initialization:** Allow the system to complete its self-check and initialization process.
3. **Parameter Settings:** On the control unit's display, navigate to the settings menu. Adjust parameters such as laser power, pulse frequency, and cleaning mode according to the material and contamination type.
 - *Laser Power:* Adjust based on material sensitivity and cleaning intensity required.
 - *Pulse Frequency:* Affects the speed and effectiveness of cleaning.
 - *Cleaning Mode:* Select from available modes (e.g., continuous, pulsed, specific patterns).
4. **Targeting:** Position the handheld laser cleaning head over the surface to be cleaned. Maintain a consistent distance for optimal focus.
5. **Activate Laser:** Press and hold the trigger button on the handheld head to activate the laser. The laser will emit a beam to clean the surface.

6. **Cleaning Process:** Move the laser head slowly and steadily across the surface. Observe the cleaning effect and adjust parameters as needed.
7. **Deactivate Laser:** Release the trigger button to stop the laser emission.
8. **Power Off:** Once cleaning is complete, power off the system using the main power switch.

5.3. Advanced Cleaning Technology

The DHCP300 utilizes advanced double-axis pulse technology for precise and effective cleaning. This technology allows for efficient removal of contaminants while ensuring a superior finish on both metal and wood surfaces. For models like the DHCP500 (not this model), a double swing feature provides a wider cleaning area and enhanced productivity.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your laser cleaning head.

- **Lens Cleaning:** Periodically inspect the laser lens for dust, debris, or smudges. Clean gently with a lint-free cloth and a specialized optical lens cleaning solution. Do not use abrasive materials.
- **Housing Cleaning:** Wipe down the exterior of the handheld head and control unit with a soft, dry cloth. Avoid using harsh chemicals or solvents.
- **Cable Inspection:** Regularly check all cables for signs of wear, fraying, or damage. Replace damaged cables immediately.
- **Ventilation:** Ensure that the cooling vents on the control unit are not obstructed to prevent overheating.
- **Storage:** When not in use, store the laser cleaning head and control unit in a clean, dry environment, away from direct sunlight and extreme temperatures.



Figure 4: Close-up of the laser cleaning head, showing the lens area.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Device does not power on.	No power supply; loose power cable; power switch off.	Check power cable connection; ensure power switch is on; verify power outlet is functional.
Laser does not activate.	Trigger button not pressed; safety interlock engaged; system error.	Ensure trigger is fully pressed; check control unit for error messages; consult manual for safety interlock bypass (if applicable and safe).
Poor cleaning performance.	Incorrect laser parameters; dirty lens; incorrect working distance.	Adjust laser power and frequency; clean the laser lens; maintain consistent working distance.
Overheating warning.	Obstructed ventilation; prolonged use at high power.	Ensure vents are clear; allow the system to cool down; reduce operating time or power settings.

If the problem persists after attempting these solutions, please contact customer support.

8. SPECIFICATIONS

Feature	Detail
Model	DHCP300
Technology	Double Axis Pulse Laser Cleaning
Application	Metal, Wood, various surface contaminants
Design	Handheld, Ergonomic
Power Source	Laser Cleaning Head (requires external power supply/control unit)
Material	High-grade aluminum alloy (for durability)
Included Components	Laser Cleaning Head
Manufacturer	DMK

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your complete laser cleaning system or contact DMK customer service directly.

DMK Customer Service: Please visit the [DMK Store on Amazon](#) or refer to your purchase invoice for contact details. Protection plans may be available for extended coverage. Please check your purchase options for details.