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Hercules 8500

Hercules 8500 DHWT Hot Wire Foam Cutter Table

Instruction Manual

1. INTRODUCTION

The Hercules 8500 DHWT Hot Wire Foam Cutter Table is designed for precise cutting, forming, and sculpting of various foam materials, including Styrofoam. This tool is suitable for a wide range of applications, from architectural modeling and set design to crafting and hobby projects. It features an adjustable temperature control and a foot control pedal for hands-free operation, enhancing both precision and safety.

This manual provides essential information for the safe and effective use of your foam cutter. Please read it thoroughly before operation and retain it for future reference.

2. SAFETY INFORMATION

- **Electrical Safety:** Ensure the unit is connected to a grounded 110/120V AC outlet. Do not operate with wet hands or in damp conditions. Always unplug the unit when not in use or before performing maintenance.
- **Hot Wire Hazard:** The cutting wire becomes extremely hot during operation. Avoid direct contact with the wire to prevent burns. Keep flammable materials away from the hot wire.
- **Ventilation:** Operate the foam cutter in a well-ventilated area. Cutting foam can produce fumes that may be irritating or harmful if inhaled in large quantities.
- **Eye Protection:** Always wear safety glasses to protect your eyes from any debris or fumes.
- **Stable Surface:** Place the foam cutter on a stable, level, and heat-resistant surface to prevent tipping or accidental movement during operation.
- **Children and Pets:** Keep children and pets away from the operating area.
- **Unattended Operation:** Never leave the foam cutter unattended while it is powered on.

3. PACKAGE CONTENTS

Verify that all items are present upon unpacking:

- Hercules 8500 DHWT Foam Cutter Table (Corded 110V AC)
- Over-arm assembly

- Foot Control Pedal
- Spool with cutting wire (Φ0.18mm, length 5m)
- Adjustable Angle Stop with Extension Rail
- Circle Cutter Accessory

4. SETUP AND ASSEMBLY

Follow these steps to assemble your Hercules 8500 DHWT Foam Cutter Table:

1. **Attach the Over-arm:** Secure the over-arm to the main unit. Ensure it is firmly seated.
2. **Connect the Ground Wire:** Locate the ground wire eyelet and the Phillips-head screw on the underside of the over-arm. Remove the screw, run the ground wire through the eyelet, and re-attach the screw to the over-arm. This step is critical for safe operation. Leaving the ground wire detached or incorrectly attached can cause permanent damage to the unit.
3. **Install Cutting Wire:** Carefully thread the cutting wire from the spool through the designated points on the over-arm and the table. Ensure the wire is taut but not overly stressed.
4. **Connect Foot Pedal:** Plug the foot control pedal into the designated port on the unit.
5. **Position Accessories:** Place the adjustable angle stop or circle cutter accessory as needed for your specific cutting task.

IMPORTANT NOTICE:

When your table arrives you will have to install the overarm and attach the ground wire. After the overarm is installed and tightened with the thumbscrew, it is very important that the ground wire is installed to the overarm by removing the phillips-head screw, running it through the eyelet on the ground wire and then re-attaching the screw to the overarm. Leaving the ground wire detached or attaching it incorrectly can cause permanent damage to the unit.

- 1. Overarm**
- 2. Thumbscrew**
- 3. Ground Wire**
- 4. Phillips-head screw & ground wire eyelet**

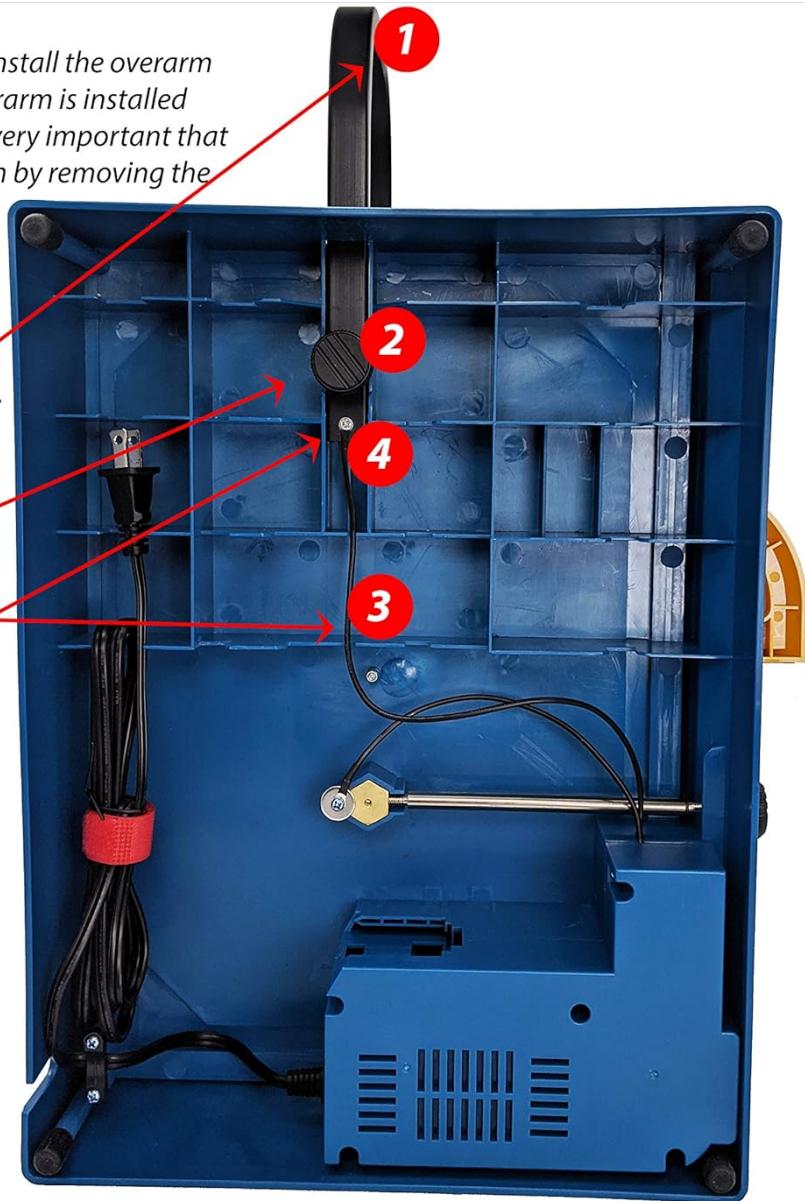


Figure 4.1: Critical assembly steps for the over-arm and ground wire connection. (1) Over-arm, (2) Thumbscrew, (3) Ground Wire, (4) Phillips-head screw & ground wire eyelet.

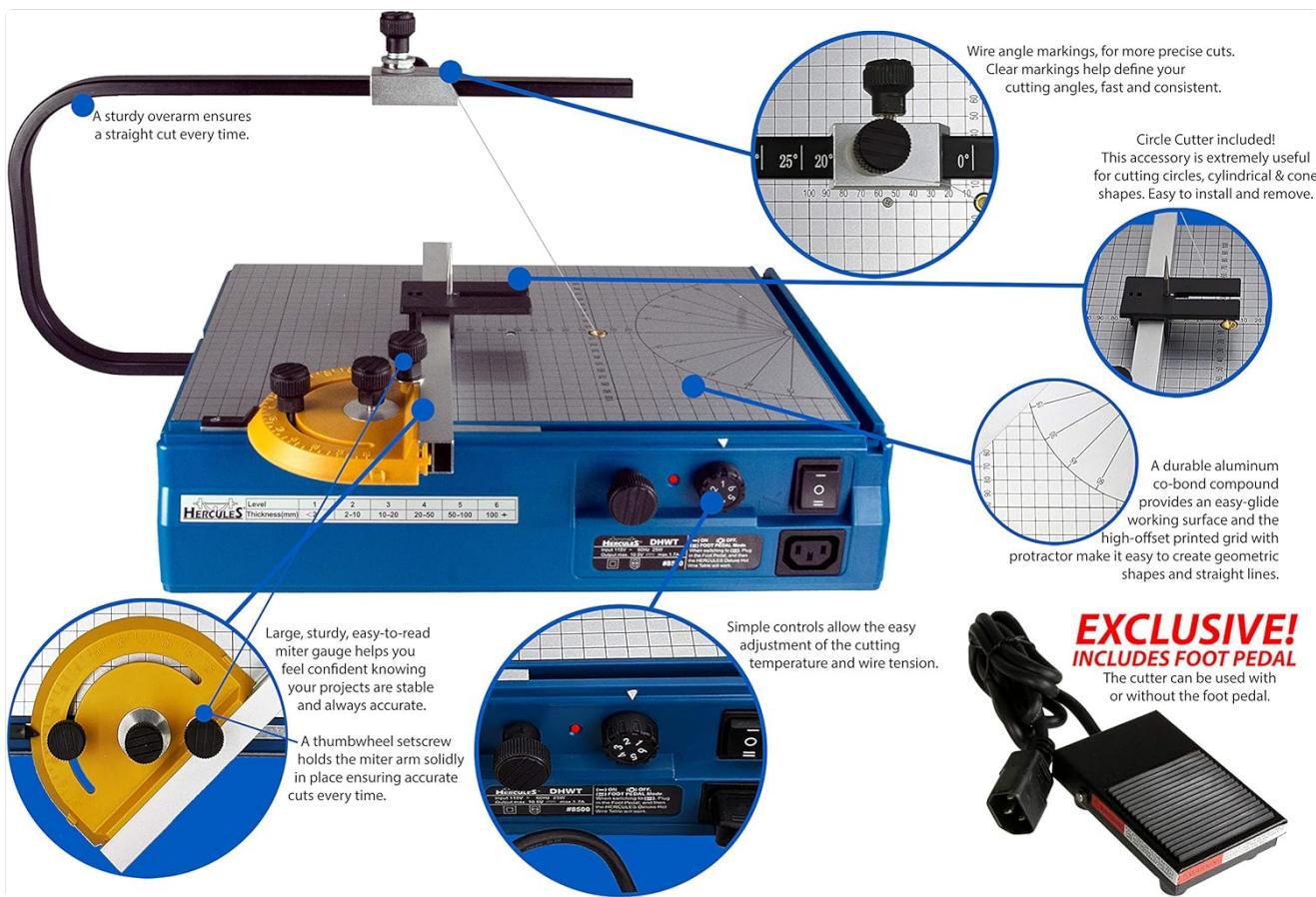


Figure 4.2: Overview of the foam cutter table with key features labeled, including the over-arm, wire angle markings, circle cutter, and controls.

5. OPERATING INSTRUCTIONS

- Power On:** Plug the unit into a standard 110/120V AC outlet. Flip the main power switch to the "ON" position.
- Adjust Temperature:** Use the temperature control knob to set the desired heat level for the cutting wire. Start with a lower setting and gradually increase it until the wire cuts smoothly through your specific foam material. Different foam types and thicknesses require different temperatures. The adjustable temperature goes up to 390 degrees Fahrenheit.
- Foot Pedal Operation:** The foot control pedal allows for hands-free activation of the hot wire. Press the pedal to heat the wire and release it to cool. This provides precise control over cutting.
- Cutting Foam:**
 - Place the foam material on the cutting surface.
 - Use the integrated grid and protractor, along with the adjustable angle stop or circle cutter, to guide your cuts.
 - Gently push the foam into the heated wire. Do not force the material, as this can bend the wire or result in an uneven cut. Allow the heat to melt through the foam.
 - Maintain a steady, consistent speed for clean cuts.
- Power Off:** When finished, turn off the main power switch and unplug the unit from the wall outlet. Allow the wire to cool completely before handling or storing.

6. MAINTENANCE

- Cleaning:** Regularly clean the cutting surface and over-arm with a soft, dry cloth. Ensure the unit is unplugged

and cool before cleaning. Do not use abrasive cleaners or solvents.

- **Wire Replacement:** The cutting wire is a consumable part and will eventually break or wear out. Replace the wire as needed using the provided spool or compatible replacement wire ($\Phi 0.18\text{mm}$). Refer to the setup instructions for proper wire installation.
- **Storage:** Store the foam cutter in a clean, dry place, away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Wire not heating	Unit not plugged in; Power switch off; Foot pedal not pressed; Broken wire; Faulty connection.	Check power connection; Turn on power switch; Press foot pedal; Replace cutting wire; Inspect wire connections.
Wire breaks frequently	Temperature too high; Forcing foam too quickly; Wire tension too high; Old/fatigued wire.	Reduce temperature setting; Cut slower, allow heat to do the work; Adjust wire tension; Replace wire.
Uneven cuts	Inconsistent cutting speed; Wire not taut; Foam not properly guided; Over-arm not square.	Maintain steady speed; Ensure wire is taut; Use guides/fences; Check over-arm alignment.
Unit gets excessively hot (transformer)	Unit left plugged in for extended periods without use.	Unplug the unit when not in use. This is normal behavior for the transformer, but unplugging prevents unnecessary heat generation.

8. SPECIFICATIONS

Model: 8500 DHWT

Power Input: 110/120V AC, 50-60 Hz

Material: Aluminum (Table surface, Handle, Over-arm)

Blade Material: High Carbon Steel (for cutting wire)

Finish Type: Non-stick (working surface)

Over-arm Throat: 13.75 inches (approx. 35 cm)

Over-arm Height: 6 inches (approx. 15 cm)

Cutting Wire Diameter: $\Phi 0.18\text{mm}$

Adjustable Temperature: Up to 390 degrees Fahrenheit

Item Weight: 9.13 pounds (approx. 4.14 kg)

Package Dimensions: 16.85 x 13.27 x 4.96 inches (approx. 42.8 x 33.7 x 12.6 cm)

UPC: 855170001827

9. WARRANTY AND SUPPORT

For warranty information, technical support, or to purchase replacement parts, please contact Hercules customer service. Refer to the product packaging or the official Hercules website for current contact details.

Website: www.herculescutters.com

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