Plustool K-BM-117-US

Plustool 6PCS Ratcheting Wire Crimping Tool Set Instruction Manual

Model: K-BM-117-US

1. Introduction

Thank you for choosing the Plustool 6PCS Ratcheting Wire Crimping Tool Set. This comprehensive kit is designed for professionals and DIY enthusiasts alike, offering versatility and precision for a wide range of electrical connections. This manual provides detailed instructions for safe and effective use, maintenance, and troubleshooting.

The set includes one ratcheting crimping tool and six interchangeable chrome dies, each designed for specific terminal types. The tool features an ergonomic handle, a precise ratcheting mechanism with auto-release, and an adjustable compression wheel for optimal crimping force.

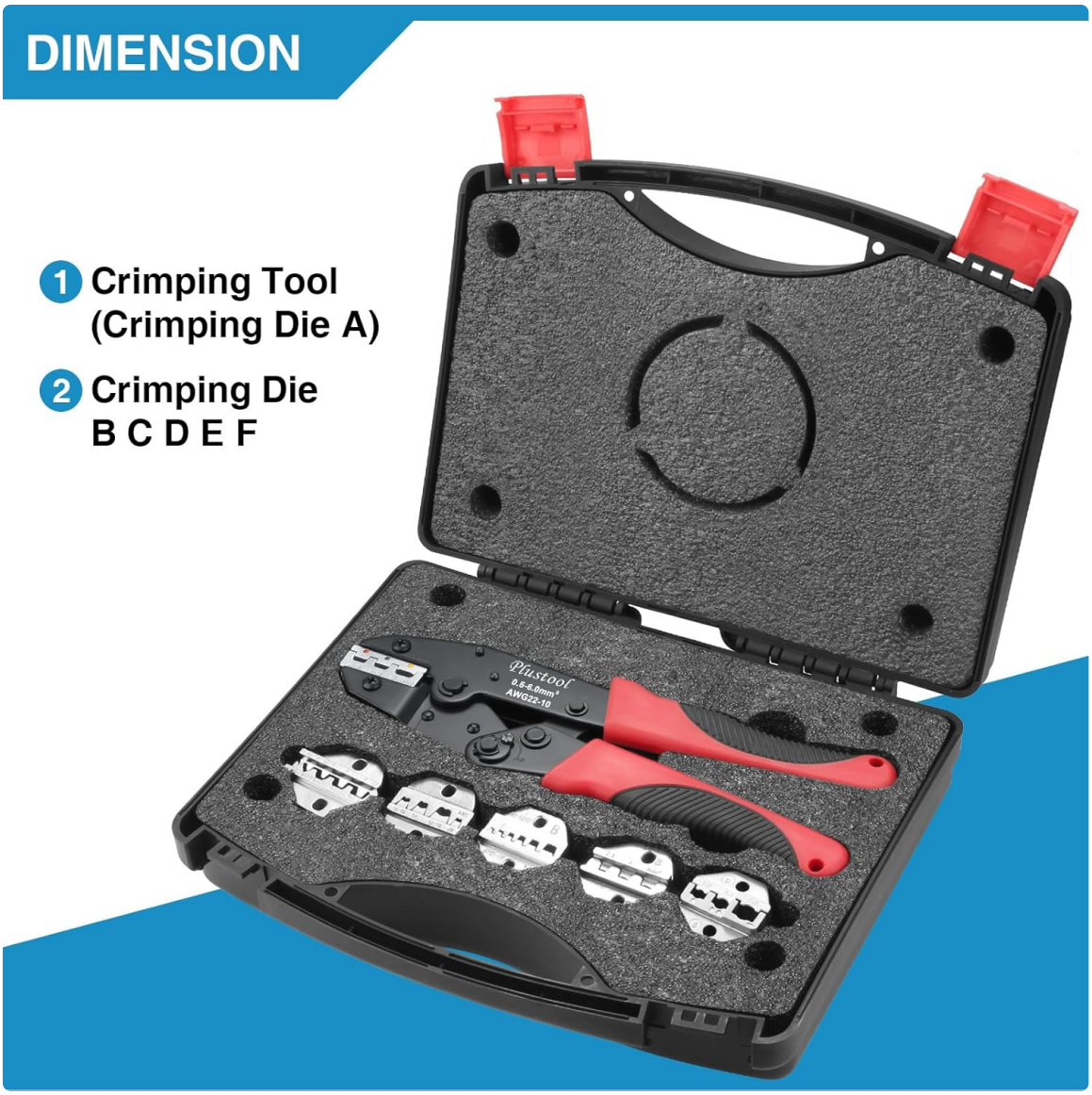

Figure 1: Plustool 6PCS Crimping Tool Set with its carrying case and interchangeable dies.

2. Product Overview

The Plustool Crimping Tool Set is engineered for strong, reliable crimps across various applications. Its design prioritizes user comfort and consistent performance.

Key Components:

- **Ratcheting Crimping Tool:** The main body of the tool, featuring an ergonomic handle and a precise ratcheting mechanism.
- **Interchangeable Dies (6 types):** Chrome-plated dies for different terminal types, easily swapped using a screwdriver.
- **Carrying Case:** A durable case for organized storage and transport of the tool and dies.

Features:

- **Strong Crimp:** Jaws forged with 40CR precision technology ensure perfect, secure crimps without jaw drop.
- **Wide Compatibility:** Six different die types support heat shrink, insulated nylon, non-insulated,

ferrule, open barrel, and solar connectors.

- **Precision Ratcheting Structure:** Ensures uniform crimps by completing a full ratcheting cycle until automatic release. A quick-release lever allows opening jaws at any position.
- **Ergonomic Handle Design:** Cushioned, non-slip handles provide maximum comfort, reduced hand fatigue, and strong grip.
- **Adjustable Compression Wheel:** A star wheel allows adjustment of crimping height for the right amount of force.

Figure 2: Detailed features of the Plustool Crimping Tool.

3. Specifications

Specification	Detail
Manufacturer	Plustool
Model Number	K-BM-117-US
Material	Metal (40CR precision technology jaws)

Handle Material	Ergonomic (cushioned, non-slip)
Item Weight	1.14 kg
Die Types Included	6 (Heat Shrink, Insulated Nylon, Non-Insulated, Ferrule, Open Barrel, Solar)

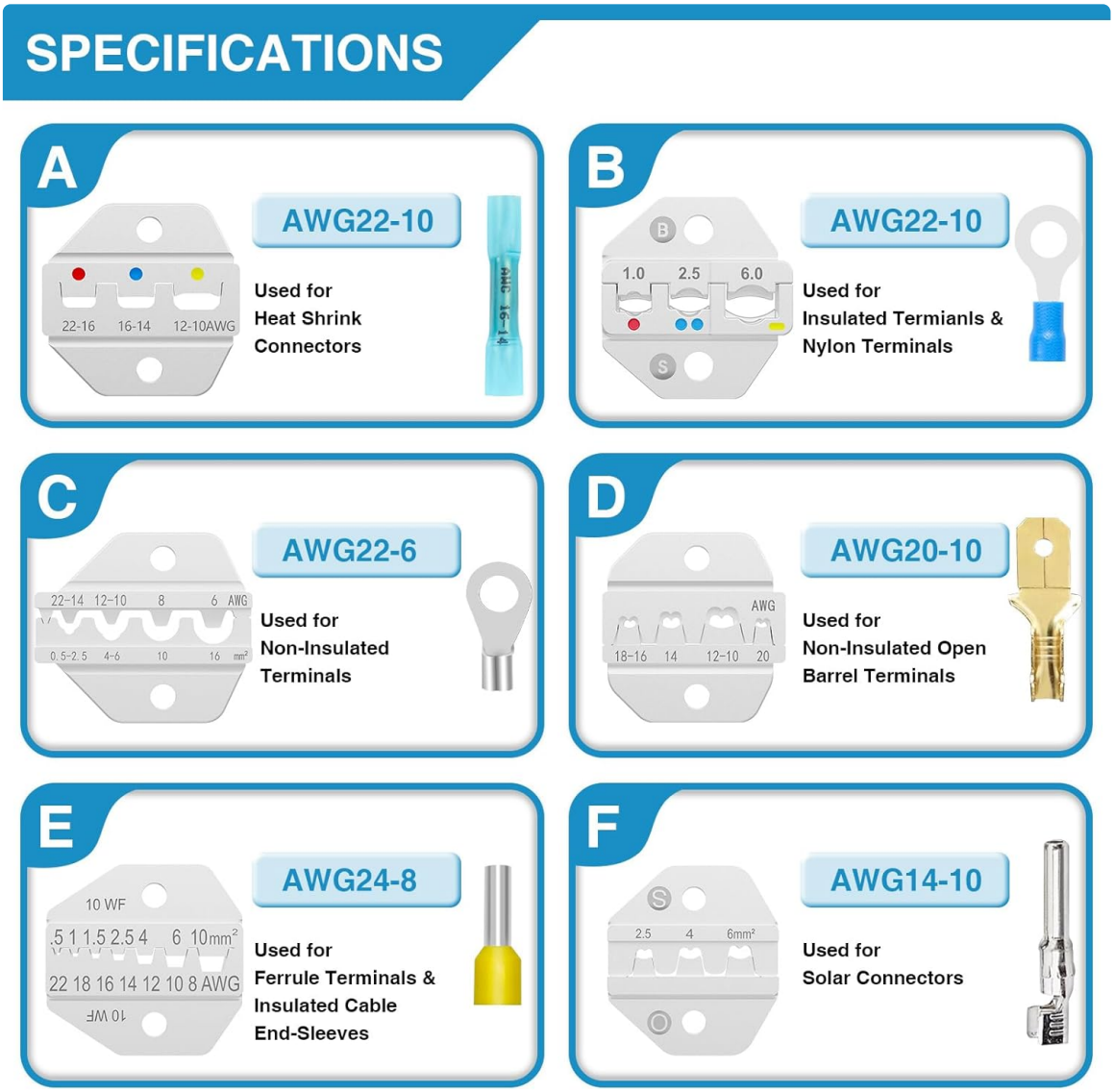

Figure 3: Overview of the six interchangeable crimping dies and their compatible terminal types.

4. Setup

Changing Crimping Dies:

The Plustool crimping tool features easily interchangeable dies. Follow these steps to change them:

1. Identify the two screws holding the current dies in place on the crimping tool.
2. Use the provided screwdriver to loosen and remove these two screws.
3. Carefully remove the existing dies from the tool.
4. Select the appropriate new dies for your application (refer to Figure 3 for die types).
5. Insert the new dies into the tool, ensuring they are correctly aligned.
6. Reinsert and tighten the two screws securely to hold the new dies in place.

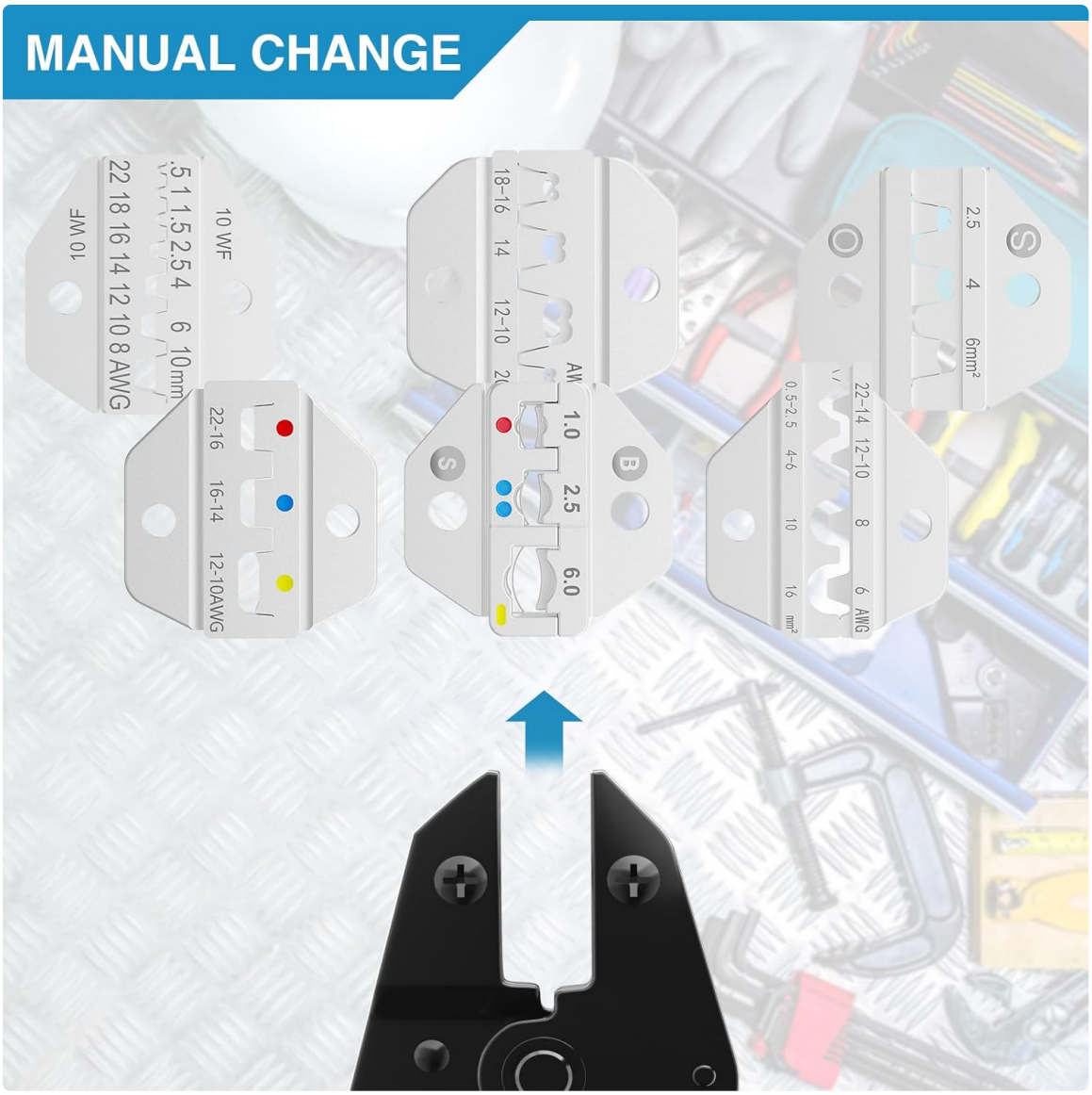

Figure 4: Manual change of crimping dies.

Figure 5: Changing crimping dies with a screwdriver.

Adjusting Crimping Force:

The tool features an adjustable compression wheel to fine-tune the crimping force. If crimps are too loose or too tight, adjust the star wheel located near the pivot point. Turn clockwise for tighter crimps (more force) and counter-clockwise for looser crimps (less force). A small screw holds the adjustment in place.

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Video 1: This video demonstrates the crimping tool's features, including the effortless spring, quick release trigger, precise ratcheting mechanism, 40CR precision technology jaws with AWG markings, adjustable compound action design for more crimping power, and ergonomic grips to reduce hand fatigue. It also shows the tool in use for various applications like motorcycle and automobile wiring.

5. Operating Instructions

Always ensure you select the correct die for your terminal type and wire gauge. Strip the wire insulation to the appropriate length, typically about a quarter of an inch, to ensure proper contact without exposing excess wire.

General Crimping Steps:

1. Select the correct crimping die and install it on the tool.
2. Open the crimping tool jaws.
3. Insert the terminal into the appropriate slot on the die.
4. Insert the stripped wire into the terminal.
5. Squeeze the handles firmly until the ratcheting mechanism releases automatically, indicating a complete crimp.
6. Inspect the crimp for tightness and proper formation.

Specific Terminal Types:

- **Heat Shrink Connectors (AWG 22-10):** Use Die A. After crimping, apply heat with a heat gun until the connector shrinks and seals around the wire. This is recommended for marine installations.
- **Insulated Terminals & Nylon Terminals (AWG 22-10):** Use Die B. Ensure the terminal is seated correctly before crimping.
- **Non-Insulated Terminals (AWG 22-6):** Use Die C. These terminals require a strong, secure crimp directly onto the bare wire.
- **Open Barrel Terminals (AWG 20-10):** Use Die D. Position the terminal so the open barrel is correctly aligned with the die for a secure, folded crimp.
- **Ferrule Terminals & Insulated Cable End-Sleeves (AWG 24-8):** Use Die E. Insert the ferrule onto the stripped wire, then crimp. The tool will pinch the plastic sleeve around the wire and crimp the metal ferrule.
- **Solar Connectors (AWG 14-10):** Use Die F. These specialized dies ensure a robust connection for solar applications.

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Video 2: This video demonstrates the crimping process for various terminal types including Heat Shrink, Insulated, Non-Insulated, Open Barrel, Ferrule, and Solar Connectors using the corresponding dies (A-F).

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Video 3: This video specifically demonstrates the crimping process for heat shrink connectors, showing how to crimp the terminal and then apply heat to shrink the insulation for a sealed connection.

6. Maintenance

- **Cleaning:** Keep the crimping tool and dies clean and free from debris. Wipe them down with a clean, dry cloth after each use.
- **Lubrication:** Periodically apply a light oil to the moving parts of the tool to ensure smooth operation.
- **Storage:** Store the tool and dies in the provided carrying case in a dry environment to prevent rust and damage.
- **Inspection:** Regularly inspect the dies for wear or damage. Worn dies can lead to poor crimps. Replace damaged dies as needed.

7. Troubleshooting

- **Loose Crimps:** If crimps are consistently loose, ensure the correct die is used for the wire and terminal. Adjust the compression wheel to increase crimping force (turn clockwise).
- **Damaged Wires/Terminals:** If the wire or terminal is damaged during crimping, check if the correct die is used and if the compression force is too high (turn compression wheel counter-clockwise). Ensure the wire is stripped to the correct length.
- **Tool Jams:** If the tool jams during crimping, use the quick-release lever to open the jaws. Inspect for any obstructions or misaligned components.

8. Applications

The Plustool 6PCS Ratcheting Wire Crimping Tool Set is suitable for a wide range of electrical work, including:

- Home appliance repair
- Vehicle circuit connections (automobiles, motorcycles)
- Battery systems
- Solar panel installations
- General electrical wiring projects

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Video 4: This video showcases the versatility of the crimping tool for various applications, including DIY and professional electrical work on motorcycles, automobiles, and battery systems.

9. Warranty & Support

Plustool products are manufactured to high-quality standards. For warranty information, technical support, or replacement parts, please refer to the contact information provided with your purchase or visit the official Plustool website.