HANMATEK SD2

HANMATEK SD2 Digital Display Soldering Station User Manual

Model: SD2

1. Introduction

The HANMATEK SD2 Digital Display Soldering Station is a professional-grade tool designed for precise and efficient soldering tasks. Featuring a digital temperature display and advanced PID technology, it ensures rapid heating and stable temperature control for various electronic repair and assembly applications. This manual provides essential information for safe and effective operation, maintenance, and troubleshooting of your soldering station.

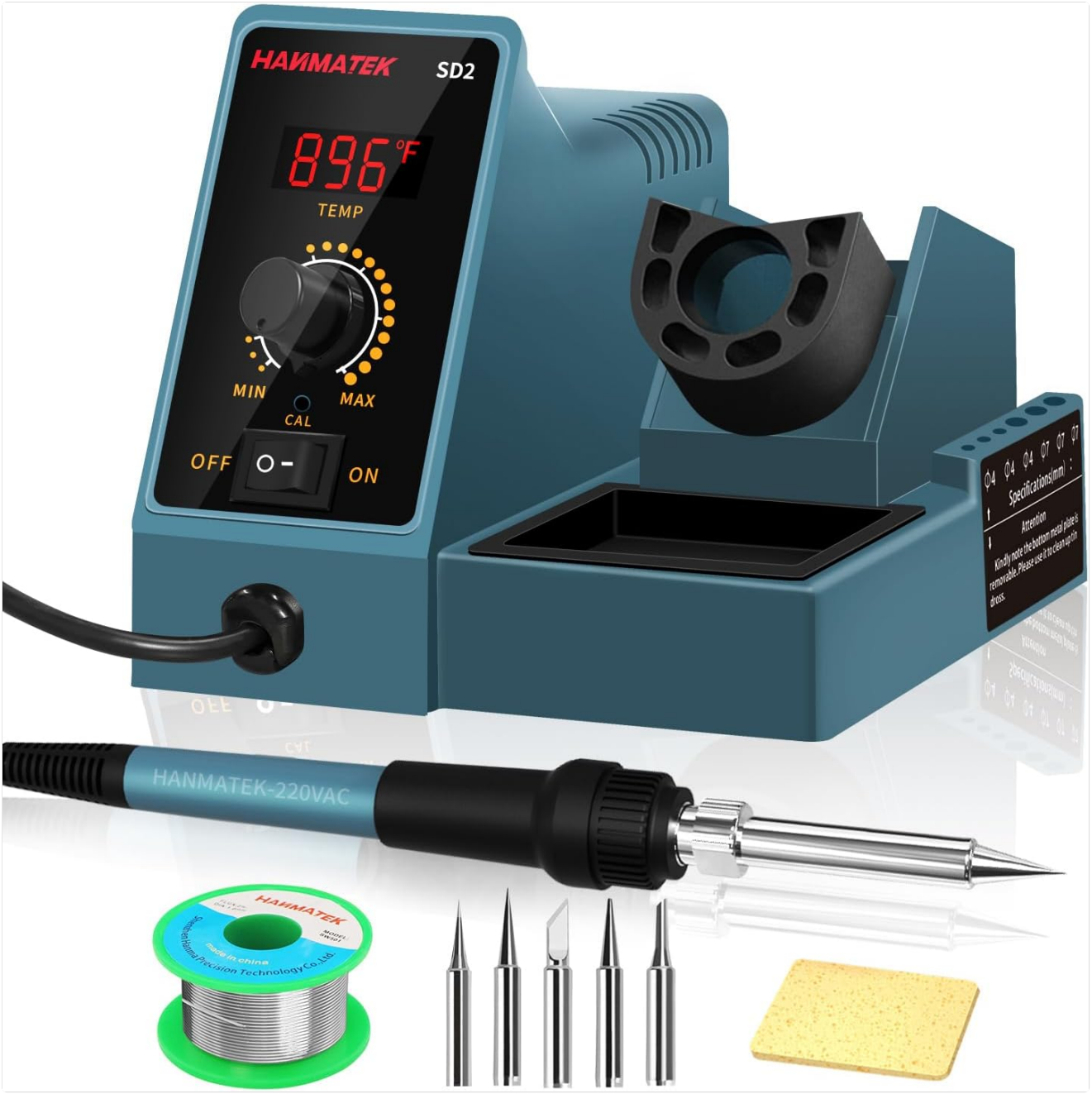

Figure 1: HANMATEK SD2 Digital Display Soldering Station and included accessories.

2. Safety Instructions

Always observe the following safety precautions to prevent injury or damage to the soldering station:

- Ensure the soldering station is placed on a stable, heat-resistant surface.
- Do not touch the soldering iron tip or heating element when the unit is powered on, as temperatures can reach up to 896°F (480°C).
- Always use the provided soldering iron holder when the iron is not in use.
- Work in a well-ventilated area to avoid inhaling solder fumes.
- Wear appropriate personal protective equipment, including safety glasses.
- Unplug the soldering station from the power outlet when not in use or before performing maintenance.
- The unit incorporates safety features such as a fuse to prevent leakage, high-temperature resistant silicone

wire, and a power-off protection switch. Do not attempt to bypass or modify these features.

- Connect the soldering iron to the station before turning on the unit, as the metal prongs carry high voltage.
- Keep out of reach of children.

3. Package Contents

Verify that all items are present in the package:

- 1 x HANMATEK 60W Digital LED Display Soldering Iron Station
- 5 x Extra Soldering Iron Tips (various sizes)
- 1 x AC Power Cord
- 1 x Tin Holder (for solder wire)
- 1 x Heat-resistant Sponge
- 1 x User Manual (this document)

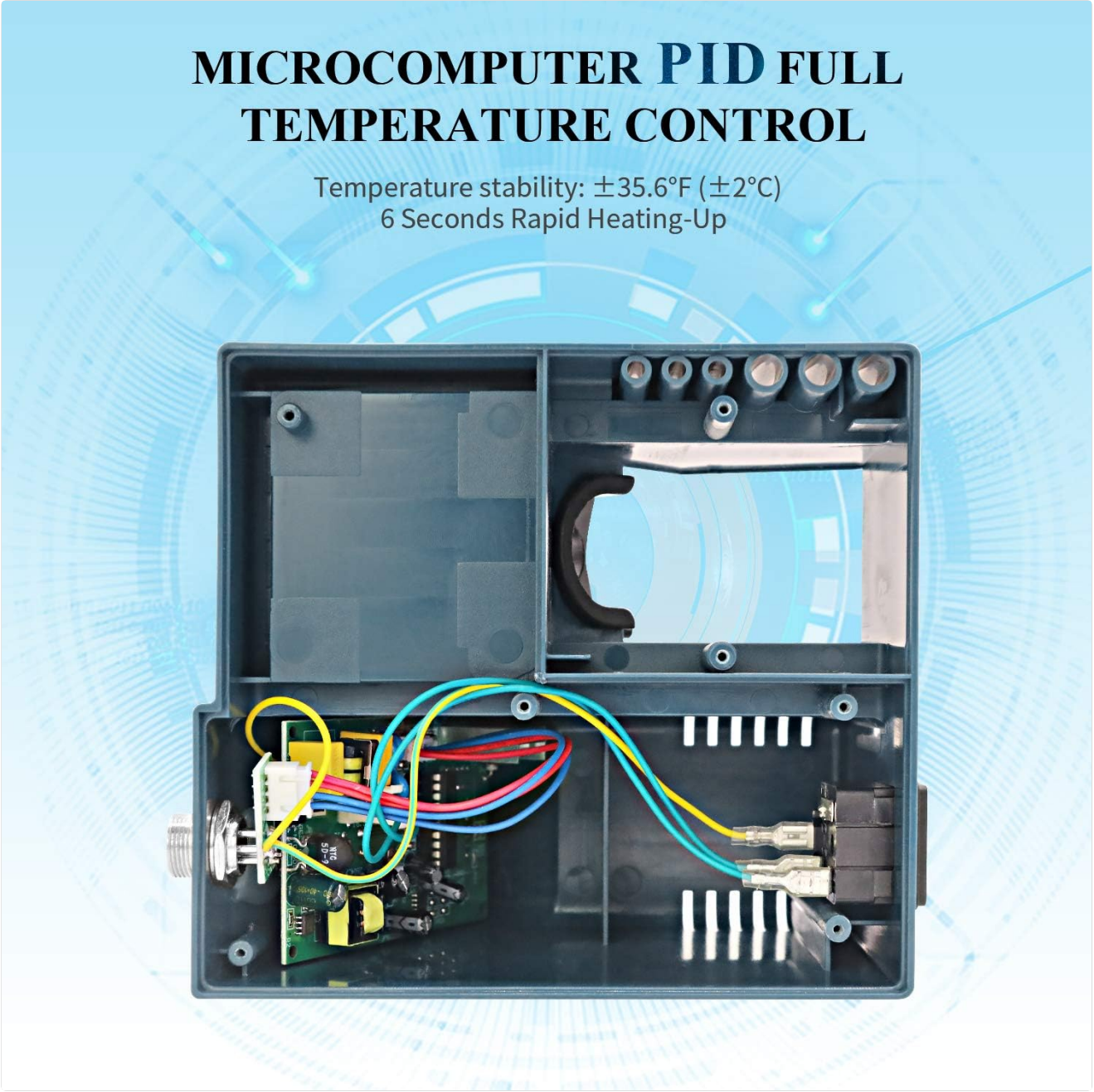

Figure 2: Internal components of the soldering station, highlighting robust construction.

4. Product Features

- **Fast Heating & Stable Temperature:** Equipped with a smart transformer, ceramic craft iron core, and advanced PID (Proportional-Integral-Derivative) technology, this station achieves rapid heating in approximately 6 seconds to 392°F (200°C) and maintains a stable temperature.
- **Digital Display:** Clear LED digital display for precise temperature monitoring.
- **Durable Construction:** Made from high-quality heat-resistant and drop-resistant plastic material. The soldering iron cable is crafted from high-temperature resistant silicone, maintaining flexibility even in cold conditions.
- **Safety Features:** Includes a fuse for leakage prevention, power-off protection switch, and lead-free, non-toxic soldering iron nozzle for enhanced user safety.
- **Convenient Design:** Features a built-in soldering iron holder, a sponge box, and a tin wire holder for

organized workspace.

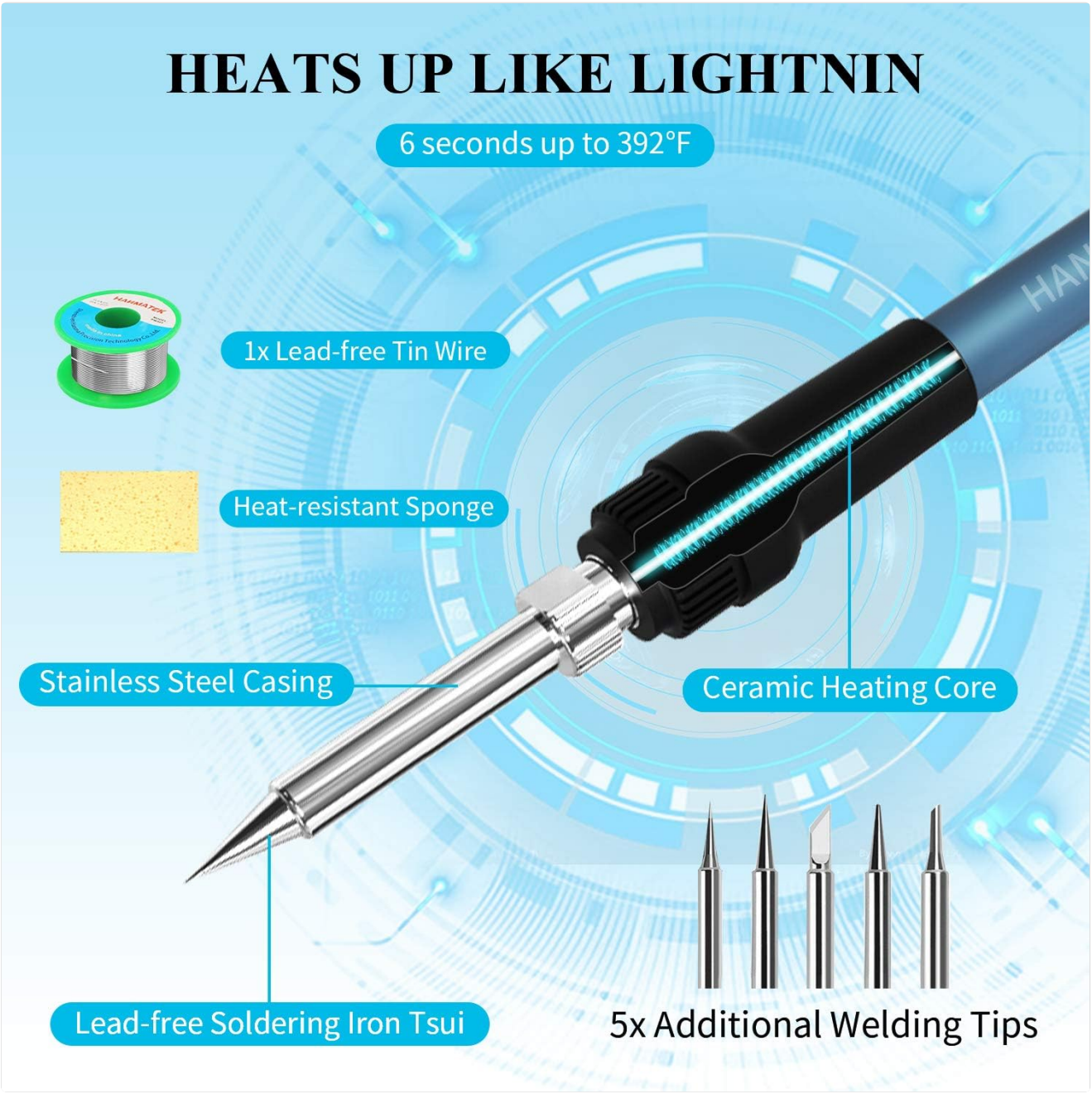

Figure 3: Detailed view of the soldering iron's ceramic heating core and stainless steel casing.

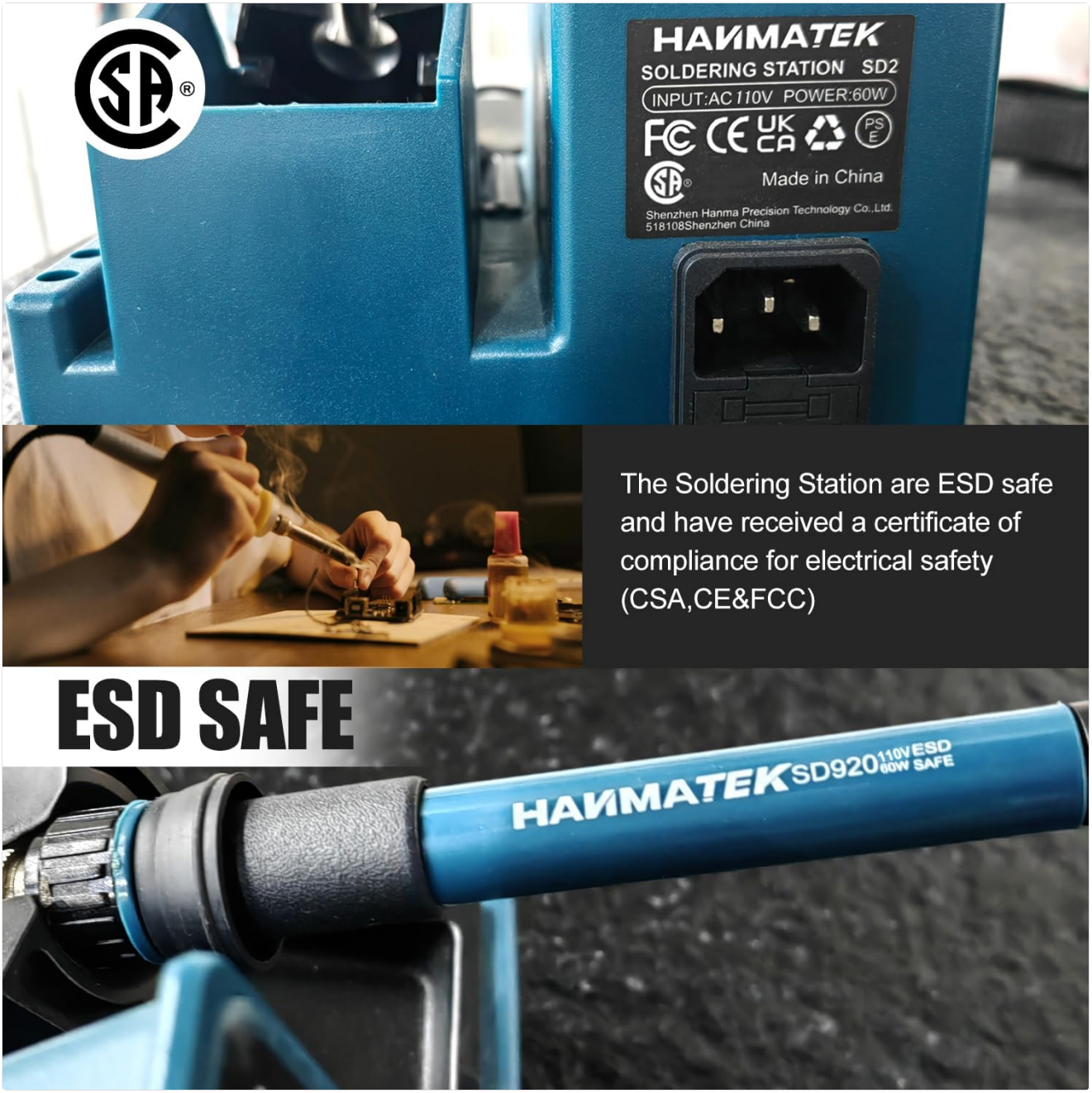

Figure 4: Key components of the soldering station, including the digital display, temperature adjustment knob, and storage features.

5. Setup

1. **Unpacking:** Carefully remove all components from the packaging and inspect for any damage.
2. **Placement:** Place the soldering station on a stable, flat, and heat-resistant surface. Ensure adequate ventilation around the unit.
3. **Connect Soldering Iron:** Insert the soldering iron's connector securely into the corresponding port on the soldering station.
4. **Solder Wire Holder:** Attach the tin holder to the side of the station if desired. Place your solder wire spool onto the holder.
5. **Sponge Preparation:** Dampen the heat-resistant sponge with water and place it in the sponge box. The sponge is used for cleaning the soldering iron tip.
6. **Power Connection:** Connect the AC power cord to the soldering station and then plug it into a suitable power

outlet.

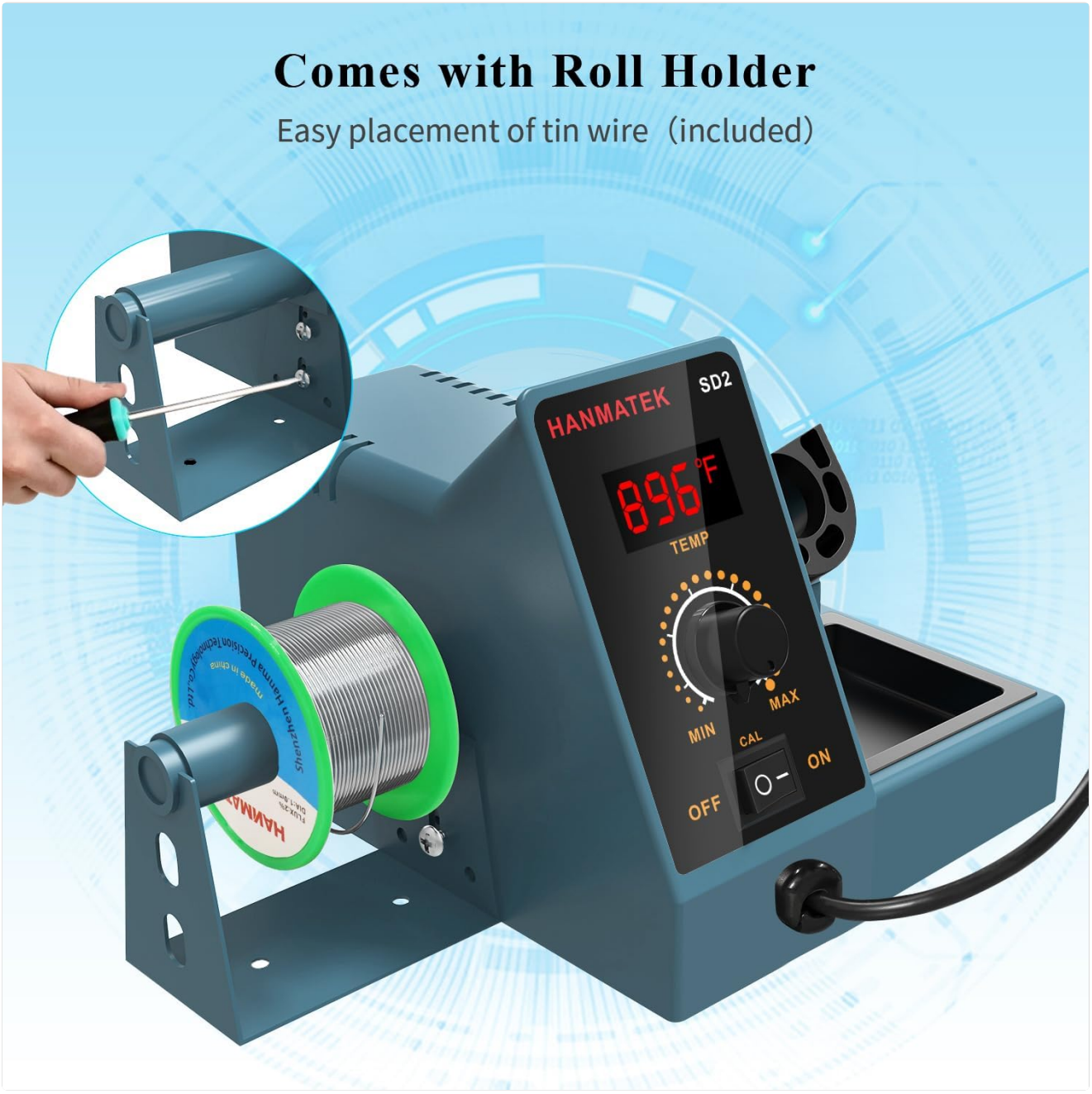

Figure 5: Installation of the tin wire holder for convenient solder wire dispensing.

6. Operating Instructions

1. **Power On:** Flip the "ON/OFF" switch to the "ON" position. The digital display will illuminate, showing the current temperature.
2. **Temperature Adjustment:** Rotate the temperature adjustment knob to set the desired temperature. The digital display will show the set temperature and then the actual temperature as it heats up. The temperature range is 392°F (200°C) to 896°F (480°C).
3. **Heating:** The soldering iron will rapidly heat to the set temperature. The PID control system ensures quick and stable temperature attainment.
4. **Tinning the Tip:** Before first use, or after cleaning, "tin" the soldering iron tip by applying a small amount of solder to the heated tip. This helps protect the tip and ensures efficient heat transfer.

5. **Soldering:**
    - Clean the tip on the damp sponge before each use.
    - Apply the heated tip to the component lead and pad simultaneously to heat them.
    - Once heated, apply solder to the junction of the tip, lead, and pad. The solder should flow smoothly and create a shiny, conical joint.
    - Remove the solder, then remove the iron. Allow the joint to cool without disturbance.
6. **Power Off:** When finished, turn the "ON/OFF" switch to the "OFF" position. Allow the iron to cool completely in its holder before storing.

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Video 1: Demonstration of the HANMATEK SD2 Soldering Station's rapid heating and use in circuit board repair. This video shows the digital display, temperature adjustment, and practical application of the soldering iron.

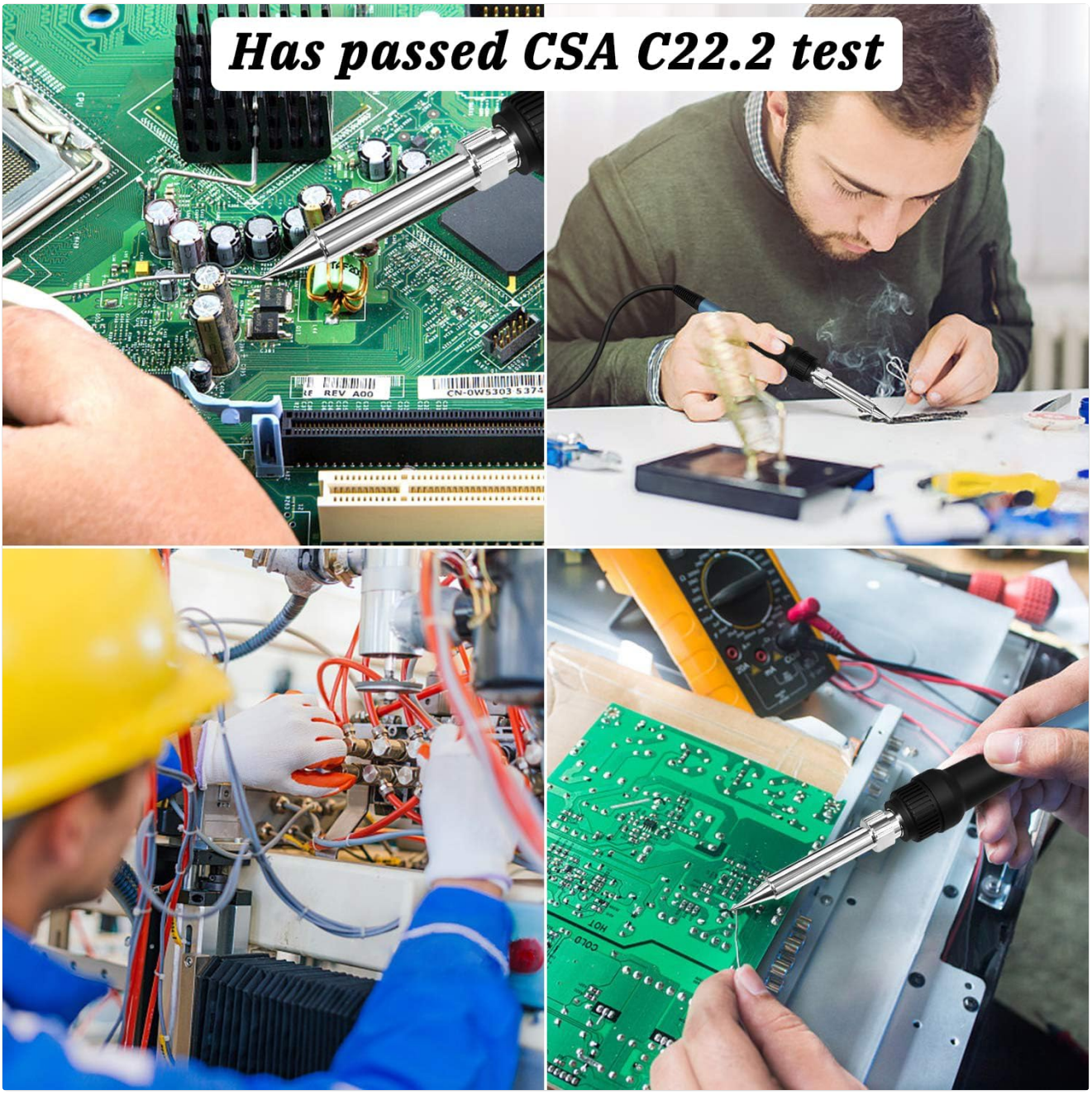

Figure 6: Examples of the soldering station being used for different applications, including circuit board work and component soldering.

7. Maintenance

- **Tip Cleaning:** Regularly clean the soldering iron tip on the damp sponge to remove excess solder and oxidation. A clean tip ensures efficient heat transfer and extends tip life.
- **Tip Replacement:** If the tip becomes corroded or damaged, replace it with one of the included extra tips. Ensure the iron is cool before changing tips.
- **General Cleaning:** Keep the soldering station and iron handle clean and free of dust and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Storage:** Store the soldering station in a dry, safe place when not in use.

8. Troubleshooting

Problem	Possible Cause	Solution
Soldering iron not heating up.	Power switch is off; power cord not connected; iron not properly connected to station; internal fuse blown.	Ensure power switch is ON. Check power cord connection. Re-seat the iron's connector. If fuse is suspected, contact support.
Temperature displayed is inaccurate or fluctuates.	Tip is dirty or oxidized; sensor issue; environmental factors.	Clean and re-tin the soldering tip. Ensure proper tip seating. Allow unit to stabilize. Note: The manual's initial tinning temperature suggestion (200-260°F) may differ from the actual minimum operating temperature (392°F). Always operate within the station's specified range.
Solder not melting or flowing well.	Temperature too low; tip is dirty or not tinned; incorrect solder type.	Increase temperature. Clean and re-tin the tip. Ensure you are using appropriate solder for your application.
Soldering iron handle feels loose.	Handle components are not fully tightened.	Gently tighten the threaded plastic components of the handle. Do not overtighten.

9. Specifications

Specification	Value
Model Number	SD2
Wattage	60 watts

Specification	Value
Voltage	275 Volts (AC)
Temperature Range	392°F - 896°F (200°C - 480°C)
Temperature Stability	±35.6°F (±2°C)
Display Type	LCD Digital Display
Item Weight	2.44 pounds (approx. 1.11 kg)
Package Dimensions	8.23 x 8.07 x 7.17 inches
Material	PVC (cable), Heat-resistant plastic (station body)

10. Warranty and Support

HANMATEK stands behind the quality of its products. This soldering station comes with a 30-Day unconditional Money Back Guarantee. Additionally, HANMATEK provides life-long friendly after-sales service.

For any questions, technical support, or warranty claims, please contact HANMATEK customer service through the official channels or the retailer where the product was purchased.

You can visit the HANMATEK Store for more information:HANMATEK Official Store