

[Manuals.plus](#) /

› [EliteBloom](#) /

› EliteBloom CT-300A Hydraulic Tube Expander Kit User Manual

EliteBloom CT-300A

EliteBloom CT-300A Hydraulic Tube Expander Kit

Model: CT-300A | Brand: EliteBloom

1. INTRODUCTION

This manual provides instructions for the safe and effective use of the EliteBloom CT-300A Hydraulic Tube Expander Kit. This tool is designed for expanding soft tubing in plumbing, heating, gas, refrigeration, and air conditioning systems. The kit eliminates the need for copper couplings, reducing material costs and the possibility of leaks by allowing for single-side welding.

2. PACKAGE CONTENTS

Verify that all components listed below are present in your kit:

- 1 x Hydraulic Tube Expander
- 1 x Tube Cutter
- 1 x Inner-outer Reamer (Deburring Tool)
- 7 x Expander Heads (Imperial sizes: 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8")
- 1 x Storage Box



All components of the CT-300A Hydraulic Tube Expander Kit.



The main hydraulic tube expander tool.



The seven imperial expander heads included in the kit.



The tube cutter for preparing tubing.



The inner-outer reamer for deburring tube ends.



The durable red storage box for organizing and protecting the kit.

3. SAFETY INFORMATION

Always prioritize safety when using this tool. Read and understand all instructions before operation.

- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure your work area is well-lit and free from obstructions.
- Keep children and bystanders away from the work area.
- **WARNING:** In low-temperature environments, heat the copper tube with a flame before expansion to prevent cracking during the process.
- **CAUTION:** If you have heated the copper tube with a flame, be careful not to burn your hands during subsequent steps. Allow the tube to cool sufficiently or use heat-resistant gloves.

4. SETUP

Before beginning the expansion process, prepare your tubing and the expander tool.

1. **Cut the Tube:** Use the included tube cutter to cut the copper, aluminum, titanium, or soft steel tube to the desired length. Ensure a clean, straight cut.
2. **Deburr the Tube:** Use the inner-outer reamer to remove any burrs from the inside and outside edges of the cut tube. This ensures a smooth surface for expansion and prevents damage to the expander head.
3. **Anneal the Tube (if necessary):** For hard or thick-walled tubes, or in low-temperature environments, anneal the tube by heating it with a flame. This softens the metal, making expansion easier and preventing cracks. Refer to safety warnings regarding heated tubes.
4. **Attach Expander Head:** Select the appropriate expander head size (e.g., 3/8", 1/2", etc.) for your tube and screw it securely onto the hydraulic expander tool.



Use the tube cutter to achieve a clean cut.



Deburr the tube ends to ensure a smooth expansion.



7 EXPANSION HEADS:
CT-300A (Imperial) : 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8"

Select the correct expander head for your tube size.

5. OPERATION

Follow these steps to expand your tubing using the hydraulic expander tool:

1. **Insert Tube:** Place the deburred end of the tube onto the selected expander head.
2. **Tighten Relief Valve:** Locate the relief valve knob on the hydraulic expander. Tighten it to the 'on' position (usually clockwise) to prepare for pumping.
3. **Pump Handle:** Begin pumping the handle of the hydraulic expander. Continue pumping until the tube is expanded to the end of the expander head, achieving the desired flare.
4. **Loosen Relief Valve:** Turn the relief valve knob to the 'off' position (usually counter-clockwise) to release the pressure and loosen the expander head.
5. **Remove Tube:** Carefully remove the expanded tube from the expander head.

For a visual guide, please watch the official product video below:

Your browser does not support the video tag.

Video Description: This video demonstrates the step-by-step process of using the hydraulic tube expander kit. It covers cutting and deburring the tube, attaching the expander head, operating the hydraulic pump to expand the tube, and finally removing the expanded tube. Important safety warnings regarding heating copper tubes are also shown.

6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your tool kit.

- **Cleaning:** After each use, wipe down all components with a clean, dry cloth to remove any debris or residue.
- **Lubrication:** Periodically apply a light coat of machine oil to moving parts of the hydraulic expander and tube cutter to ensure smooth operation and prevent rust.
- **Storage:** Store all components in the provided storage box in a dry, cool place, away from direct sunlight and moisture.
- **Inspection:** Regularly inspect expander heads for wear or damage. Replace any damaged components to maintain performance and safety.

7. SPECIFICATIONS

Feature	Specification
Model	CT-300A
Expander Head Sizes (Imperial)	3/8", 1/2", 5/8", 3/4", 7/8", 1", 1-1/8"
Compatible Tube Materials	Soft copper, Aluminum, Titanium, Soft steel
Weight (Kit)	Approximately 4000g

8. TROUBLESHOOTING

If you encounter issues with your Hydraulic Tube Expander Kit, consider the following common solutions:

- **Tube Cracking during Expansion:** Ensure the tube is properly deburred. If working in cold conditions or with hard/thick-walled tubes, anneal the tube by heating it before expansion.

- **Expander Head Not Engaging:** Verify that the correct size expander head is securely screwed onto the tool. Ensure the tube end is properly seated on the head.
- **Difficulty Pumping / No Expansion:** Check that the relief valve knob is fully tightened to the 'on' position. If the issue persists, the hydraulic mechanism may require inspection by a qualified technician.
- **Tube Not Expanding Evenly:** Ensure the tube is cut straight and deburred thoroughly. Apply even pressure during pumping.

For persistent issues or technical support, please contact EliteBloom customer service.

9. WARRANTY AND SUPPORT

EliteBloom products are manufactured to high-quality standards. For information regarding warranty coverage, technical support, or replacement parts, please refer to the warranty card included with your purchase or visit the official EliteBloom website.