Imperial 370-FHC

Imperial Stride Tool 370-FHC Triple Header Tube Bender Instruction Manual

Model: 370-FHC

1. Introduction

The Imperial Stride Tool 370-FHC is a triple header tube bender designed for precise 180-degree bends in various tubing materials. This tool is capable of bending 3/16", 1/4", 3/8", and 1/2" tubing made from soft copper, aluminum, and thin-wall steel. Its design incorporates calibrated markings for accurate bends and cushion grips for user comfort.

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your 370-FHC tube bender. Please read it thoroughly before use.

2. Safety Instructions

Always prioritize safety when using any hand tool. Failure to follow these instructions may result in injury or damage to the tool or workpiece.

- **Wear appropriate personal protective equipment (PPE):** Always wear safety glasses to protect your eyes from flying debris. Gloves are recommended for improved grip and hand protection.
- **Inspect the tool before use:** Ensure the bender is clean and free from damage. Do not use a damaged tool.
- **Secure your workpiece:** Ensure the tubing is properly secured and supported to prevent movement during bending.
- **Maintain a stable stance:** Use both hands to operate the bender and maintain a balanced position to prevent loss of control.
- **Do not exceed tool capacity:** Only bend tubing sizes and materials specified for this tool. Attempting to bend larger or harder tubing can damage the tool and cause injury.
- **Keep hands clear:** Ensure hands and fingers are clear of moving parts during the bending process.
- **Store properly:** Store the tool in a dry, secure location away from children and unauthorized users.

3. Product Components

The Imperial Stride Tool 370-FHC features a robust design for efficient tube bending.

Figure 1: Imperial Stride Tool 370-FHC Triple Header Tube Bender. This image displays the silver and blue tool, highlighting its triple header design for multiple tube sizes and ergonomic cushion grips.

- **Triple Header Design:** Integrated bending channels for 3/16", 1/4", 3/8", and 1/2" tubing.
- **Calibrated Markings:** Engraved markings on the tool for precise angle measurement, facilitating accurate

left-hand, right-hand, and offset bends.

- **Cushion Grips:** Ergonomically designed handles with soft grips for enhanced comfort during prolonged use.
- **Adjustable Hook:** Secures the tubing in place during the bending operation.
- **Die-Cast Aluminum Construction:** Provides durability while maintaining a lightweight profile.

4. Setup

Before beginning any bending operation, ensure the tool is properly set up for the desired tubing size.

1. **Select the correct channel:** Identify the appropriate bending channel on the triple header that matches the outer diameter of your tubing (3/16", 1/4", 3/8", or 1/2").
2. **Open the bender:** Fully open the handles of the bender.
3. **Position the tubing:** Insert the tubing into the selected bending channel. Ensure the tubing rests firmly against the inner radius of the channel.
4. **Engage the adjustable hook:** Close the adjustable hook over the tubing to secure it in position. The hook should hold the tubing snugly without deforming it.
5. **Align for desired bend:** Use the calibrated markings on the tool to align the tubing for the starting point of your bend.

5. Operating Instructions (Bending Process)

Follow these steps for making smooth, accurate bends with your 370-FHC tube bender.

1. **Prepare the tubing:** Ensure the tubing is clean and free of burrs. Mark the desired bend location on the tubing.
2. **Insert and secure tubing:** As described in the Setup section, place the tubing in the correct channel and secure it with the adjustable hook. Align the marked bend point with the '0' degree mark on the bender.
3. **Apply steady pressure:** While holding the bender firmly, slowly and steadily bring the handles together. Apply even pressure to both handles.
4. **Monitor the bend angle:** Observe the calibrated markings on the bender to achieve the desired bend angle. The tool is designed for smooth, tight-radius 180-degree bends.
5. **Release the bend:** Once the desired angle is reached, slowly release the pressure on the handles and open the bender.
6. **Remove tubing:** Carefully remove the bent tubing from the bender.
7. **Check the bend:** Inspect the bend for accuracy and smoothness. Repeat the process for additional bends as needed.

Tip: For optimal results, practice on scrap pieces of tubing to familiarize yourself with the tool's operation and the bending characteristics of different materials.

6. Maintenance

Proper maintenance ensures the longevity and performance of your Imperial Stride Tool 370-FHC.

- **Cleaning:** After each use, wipe down the bender with a clean, dry cloth to remove any dust, debris, or metal shavings.
- **Lubrication:** Periodically apply a light coat of machine oil to the pivot points and moving parts to ensure smooth operation and prevent corrosion.
- **Inspection:** Regularly inspect the bending channels, adjustable hook, and handles for any signs of wear, damage, or deformation.
- **Storage:** Store the bender in a clean, dry environment to protect it from moisture and extreme temperatures.

7. Troubleshooting

If you encounter issues while using your tube bender, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Tubing kinks or flattens during bend	Incorrect channel size; bending too quickly; tubing material too hard for tool; worn bending channel.	Ensure correct channel for tubing diameter. Apply slower, steady pressure. Verify tubing material is compatible. Inspect and replace tool if channels are worn.
Bend angle is inaccurate	Improper alignment with markings; tubing slipping.	Re-align tubing carefully with calibrated markings. Ensure adjustable hook is securely engaged.
Difficulty in bending tubing	Tubing material is too thick or hard; lack of lubrication on tool.	Confirm tubing is within the tool's specified capacity (soft copper, aluminum, thin-wall steel). Apply lubrication to pivot points.
Tool feels stiff or binds	Lack of lubrication; dirt/debris in moving parts.	Clean the tool thoroughly and apply machine oil to all pivot points.

8. Specifications

- **Model Number:** 370-FHC
- **Tubing Sizes:** 3/16", 1/4", 3/8", 1/2"
- **Bend Angle:** Up to 180 degrees
- **Compatible Materials:** Soft copper, aluminum, thin-wall steel tubing
- **Construction Material:** Die-cast aluminum
- **Product Dimensions:** 17.5 x 7.75 x 3 inches
- **Item Weight:** 2.1 pounds
- **Manufacturer:** Imperial Tools

9. Warranty and Support

For detailed warranty information, product support, or to purchase replacement parts, please contact Imperial Tools directly or visit their official website. Keep your purchase receipt as proof of purchase.
You can find more information about Imperial products at the Imperial Store.