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Rowzzi Professional Copper Pipe Swage Tool Drill Bit Set

User Manual

1. INTRODUCTION

Thank you for choosing the Rowzzi Professional Copper Pipe Swage Tool Drill Bit Set. This 6-piece set is designed for HVAC and refrigeration professionals and DIY enthusiasts to efficiently expand copper tubing for secure, leak-tight connections. These drill bits are intended for use with a hand electric drill, utilizing friction heat to preserve the copper's malleability during the swaging process.



Image 1: The complete 6-piece Rowzzi Professional Copper Pipe Swage Tool Drill Bit Set, showing all six sizes from 1/4" to 7/8".

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves, when operating power tools and handling copper tubing.
- Ensure the drill bit is securely fastened in the drill chuck before operation.

- Do not touch the drill bit or the copper pipe immediately after swaging, as they will be hot due to friction. Allow them to cool down or handle with heat-resistant gloves.
- Use the correct drill speed as recommended for metalworking to prevent overheating and damage to the tool or workpiece.
- Keep hands and loose clothing away from rotating parts.
- Store tools in a dry, safe place, out of reach of children.

3. PACKAGE CONTENTS

Your Rowzzi Copper Pipe Swage Tool Drill Bit Set includes the following:

- 1 x 7/8" (22.2mm) Copper Pipe Swaging Tool Drill Bit
- 1 x 3/4" (19mm) Copper Pipe Swaging Tool Drill Bit
- 1 x 5/8" (15.9mm) Copper Pipe Swaging Tool Drill Bit
- 1 x 1/2" (12.7mm) Copper Pipe Swaging Tool Drill Bit
- 1 x 3/8" (9.5mm) Copper Pipe Swaging Tool Drill Bit
- 1 x 1/4" (6.3mm) Copper Pipe Swaging Tool Drill Bit



Image 2: A closer view of the individual swaging tool drill bits included in the set, showing their distinct sizes and design.

4. SPECIFICATIONS

Feature	Detail
Material	Ball Bearing Steel (Alloy Steel)
Shank Type	Hexagonal (implied by images, though product spec says Round, the images show hex shanks for drill chucks)
Tool Flute Type	Straight
Sizes Included	7/8" (22.2mm), 3/4" (19mm), 5/8" (15.9mm), 1/2" (12.7mm), 3/8" (9.5mm), 1/4" (6.3mm)
Approx. Height	4.5cm / 1.77 inches (for 1/4" bit)
Approx. Shank Diameter	7mm / 0.28 inches
Compatibility	Designed for use with hand electric drills



Image 3: Detailed dimensions for each swaging tool drill bit, including their respective diameters and overall heights.

5. SETUP

To prepare the swaging tool for use, follow these steps:

1. Select the appropriate size swaging drill bit for the copper pipe you intend to expand. The bit size corresponds to the outer diameter of the pipe you are swaging.
2. Ensure your hand electric drill is unplugged or its battery is removed before attaching any accessories.
3. Open the chuck of your electric drill.
4. Insert the hexagonal shank of the chosen swaging drill bit into the drill chuck.
5. Tighten the drill chuck securely to ensure the bit is firmly held and will not slip during operation. A loose bit can be dangerous and lead to poor results.
6. Verify the bit is centered and stable before proceeding.

SWAGING TOOL BIT

The copper pipe swaging drill bit can an inserting auxiliary tool (cross screwdriver, etc.), which can be used as a manual tube expander.



Image 4: A 5/8" swaging tool drill bit securely inserted into the chuck of a hand electric drill, ready for use.

6. OPERATING INSTRUCTIONS

These swaging drill bits are designed to expand copper tubing using the heat generated by friction. This method helps maintain the copper's malleability, resulting in a smooth, leak-tight fitting.

1. Prepare the copper pipe: Ensure the end of the copper pipe is clean, deburred, and cut squarely.
2. Secure the pipe: Hold the copper pipe firmly in a vise or with a pipe clamp to prevent it from rotating during the swaging process.
3. Position the tool: With the drill bit attached to your electric drill, align the tip of the swaging bit with the opening of the copper pipe.
4. Begin swaging: Start the drill at a moderate to high speed. Slowly and steadily push the rotating swaging bit into the copper pipe. The friction will generate heat, allowing the copper to expand smoothly.
5. Continue until desired depth: Continue pushing the bit until the desired expansion depth is achieved. The design of the bit ensures a consistent flare depth.

6. Retract the tool: Once expanded, slowly withdraw the drill bit while the drill is still rotating.
7. Allow to cool: The expanded pipe end will be hot. Allow it to cool before handling or attempting to connect.
8. Inspect the flare: Visually inspect the expanded end for any cracks, deformities, or unevenness. A properly swaged pipe will have a smooth, uniform expansion.

**After installing the air conditioner, unfold the copper pipes so that the two copper pipes are connected to each other to seal the two pipes.
(install on hand electric drill,Copper pipe swaging tool)**



Image 5: An illustration of the swaging process, showing a copper pipe being expanded by the drill bit attached to an electric drill, alongside examples of finished swaged pipes.



Image 6: A visual comparison highlighting the efficiency of electric drill-driven swaging (left) versus traditional manual pipe expansion (right).

7. MAINTENANCE

Proper maintenance will extend the life of your Rowzzi swaging tool bits:

- **Cleaning:** After each use, wipe the drill bits clean with a dry cloth to remove any copper residue or dust. Do not use abrasive cleaners.
- **Lubrication:** While not strictly necessary for operation, a light coat of machine oil can be applied to the bits before storage to prevent rust, especially if stored in humid environments.
- **Storage:** Store the bits in their original packaging or a dedicated tool case to protect them from damage and corrosion. Keep them in a dry place.
- **Inspection:** Periodically inspect the bits for any signs of wear, damage, or deformation. Discontinue use if any significant damage is observed.

8. TROUBLESHOOTING

Here are some common issues and their potential solutions:

Issue: Pipe not expanding smoothly or cracking.

- **Cause:** Insufficient drill speed or too much pressure applied too quickly.
- **Solution:** Ensure the drill is operating at a high enough RPM to generate sufficient friction heat. Apply steady, consistent pressure, allowing the heat to build gradually.
- **Cause:** Pipe material is too cold or brittle.
- **Solution:** Ensure the copper pipe is at room temperature. For very cold environments, gently warm the pipe slightly before swaging (do not overheat).

Issue: Drill bit slipping in the chuck.

- **Cause:** Chuck not tightened sufficiently.
- **Solution:** Ensure the drill chuck is tightened securely around the hexagonal shank of the bit. Use a chuck key if available for maximum tightness.
- **Cause:** Shank is oily or dirty.
- **Solution:** Clean the shank of the drill bit and the inside of the drill chuck to ensure a good grip.

Issue: Excessive copper dust/shavings inside the pipe.

- **Cause:** Incorrect drill speed or excessive force.
- **Solution:** Adjust drill speed to optimize friction heat without cutting. The goal is to expand, not to ream. Ensure the pipe is deburred before swaging.
- **Note:** Some minimal dust may occur. Always clean the pipe thoroughly after swaging, especially for HVAC systems, to prevent contamination.

9. WARRANTY AND SUPPORT

Rowzzi stands behind the quality of its products. For specific warranty information, returns, or technical support, please refer to the purchase platform or contact Rowzzi customer service directly through the contact information provided at the point of purchase or on the official Rowzzi website.

Please retain your proof of purchase for any warranty claims.

